

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2081.—VOL. XLV.

LONDON. SATURDAY, JULY 10, 1875.

WITH SUPPLEMENT. PRICE SIXPENCE. PER ANNUM, BY POST, 21s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
Established 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

BUSINESS negotiated in Stocks and Shares not having a general market value. BUSINESS in all COLLIERY and IRON Shares, and in the principal WAGONS and MANUFACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.

Mr. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the CHIEF TOWNS of the United Kingdom, is prepared to deal in the various LOCAL STOCKS and SHARES at close market prices.

COTTON SPINNING SHARES Bought and Sold, including those of Oldham, Bury, Heywood, Darwen, Accrington, and neighbouring districts. This description of security can be purchased to pay the investor very fair interest upon outlay.

Accounts opened for the Fortnightly Settlement.

Monthly and Daily Price Lists issued.

Bankers: City Bank, London; South Cornwall Bank, St. Austell.

SPECIAL DEALINGS in the following, or part:—20 Ashton, 30s.; 20 Bampfylde, 18s.; 10 Bilton, 37s. 6d.; 5 Bog, 8s.; 5 Cape Copper, £2 1/2; 50 Chantales, 12s. 6d.; 50 Chapel House; 15 Cathedral, 27s. 6d.; 10 Cedar Creek, 21s. 3d.; 40 Cardiff and Swansea, 20 Devon Consols, £2 1/2; 15 Diamond Rock; 20 Emma, £2; 15 Flagstaff, 22s. 3d.; 30 Frontino, 15s.; 100 Gold; 25 Glynlimmon (Clitter), 21 1/2s. 6d.; 40 Javali, 10s. 6d.; 15 Ladywell, 23 1/2s. 6d.; 15 Last Chance, 21 1/2s. 6d.; 30 Lawes Chemical; 40 London and California, 16s. 3d.; 3 Nant-y-Glo, £2 1/2; 50 Old Treburgett, 6s.; 10 Pateley Bridge, 27; 25 Parys Mountain, 13s. 6d.; 20 Penstruthal, 11s. 6d.; 50 Positive Assurance, 13s. 6d.; 30 Plymton; 100 Rookhope, 4s.; 10 Richmond, £1 1/2; 50 St. Patrick, 22s. 6d.; 20 Sweetland, 23; 20 South Condufford, 25 7s. 6d.; 10 Tankerville, £10 1/2; 25 Thorps Gawber Hall, £10 1/2; 15 United Mexican, 22 1/2s. 6d.; 50 Utmost Bituminous, 8s. 6d.; 10 West Chiverton, £15 10s.; 20 Welsh Freehold; 5 Great Laxey, £13 1/2s.

* * Shares sold for forward delivery (one or two months) on deposit of 20 per cent.

Business on hand in all the leading TIN, COPPER, and LEAD Shares.

PATELEY BRIDGE LEAD.—Special Business in these Shares. The mine is situated in the celebrated Grassington district.

JAMES H. CROFTS, 1 FINCH LANE, LONDON.

CHAPEL HOUSE COLLIERY.—FOR SALE, SHARES in this COMPANY, paying good dividends.

JAMES H. CROFTS, 1 FINCH LANE, LONDON.

WEST CHIVERTON MINE.—Special Business. Shares dealt in at closest market prices.

JAMES H. CROFTS, 1 FINCH LANE, LONDON.

MRS. W. H. BUMFORD, STOCK AND SHARE BROKER,
44, THREADNEEDLE STREET, LONDON, E.C.,
Transacts business in MINING and COLLIERY Shares of every description. English and Foreign Stocks, Colonial Government Bonds, Railways, Banks, and Miscellaneous Shares, and all Securities dealt in on the London Stock Exchange, for INVESTMENT or SPECULATION.

Purchases and Sales negotiated in Unmarketable Stocks and Shares.

Speculative Accounts opened for the Fortnightly Settlement.

References given and required when necessary.

A Stock and Share List forwarded to bona fide Investors free on application.

Bankers: The National Provincial Bank of England, E.C.

W. H. B. has SPECIAL BUSINESS in the undermentioned:—
150 Almada, 16s. 6d. 40 East Van, 31s. 20 Pateley Bridge (Lead),
50 Blue Tent, £2 1/2%. 5 East Lovell, £2 1/2%.
50 Bog, 9s. 3d. 100 Frontino, 10 Roman Grav., £2 1/2 11-16
50 Birdseye Creek, 38s. 3d. 70 Flagstaff, £2 1/2-16 120 Rookhope, 6s.
100 Bampfylde, 100 Gold, 4s. 9d. 20 Richmond, £14 15 16
1 Carre Breca, 240%. 50 Gold Run, 7s. 8d. 100 So. Aurora, 9s. 9d.
50 Chapel House Col. 25 Gawkon (Copper). 20 Sweetland Creek, £3
100 Cedar Creek, 20s. 125 Javali, 10s. 50 St. Patrick, 22s.
50 Cathedral (Copper). 25 Last Chance, £1 1/2. 50 St. Patrick, 22s.
15 Cape Copper. 50 Malabar, 13s. 70 Tecomia, 18s. 3d.
10 Chicago, 24 1/2s. 9d. 20 Marke Valley, 35s. 10 Tankerville, £10 11-16
20 Cardiff and Swansea, 100 Malpaso, 13s. 3d. 5 Van, £24.
100 Chontales, 13s. 9d. 30 New Quebrada, £2 16 0 25 Van Consols, £2 1/2.
75 Don Pedro, 15s. 3d. 150 Old Treburgett, 25 Parys Mountain, 15s.
10 Devon Con., £2 1/2-16 25 Parys Mount, 5s. 15 Wh. Grenville, £3 1/2.
2 Dolcoath, £2 1/2%. 40 Pennerley, £1 1/2. 5 West Chiverton, £17
20 Eberhardt, £2 1/2s. 9d. 100 Penstruthal, 9s. 9d. 50 W. Great Work, 14s.
35 Emma, 9s. 125 Port Phillip, 13s. 6d. 15 Wheal Crebor.
35 East Caradon, 27s. 9d. 75 Plynlimmon, 10s. 9d. 100 Yorke Penin., 9s. 6d.

MRS. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C. (Established 10 years),
has SPECIAL BUSINESS in South Condufford, Prince Patrick, Wheal Kitty, Penhalls, and Chapel House Shares at close prices.

FERDINAND R. KIRK, STOCK BROKER,
5, BIRCHIN LANE, E.C.
Consols, Foreign Bonds, Railways, and every security quoted on 'Change bought and sold.

Bankers: London and Westminster, and City Bank.

SHARES WANTED. MARKET PRICES GIVEN:—
20 Almada. 20 Cape Copper. 20 Eberhardt.
10 Anglo Telegraph. 30 Cedar Creek. 10 Fortuna.
15 Australian. 25 Chontales. 35 Flagstaff.
30 Birdseye Creek. 40 Don Pedro. 10 Eley Brothers.
20 Cardiff and Swansea. 20 Diamond Rock. 20 General Credit.
50 Chapel House. 50 Diamond Fuel. 50 Richmond.
50 Cathedral. 50 Malabar. 40 Sweetland Creek.
5 Credit Foncier. 10 Direct U.S. Cable. 50 Shillington Iron.
5 Chillington Iron. 5 Dunaburg Rail. 60 Tankerville.
40 Altmanni Colliery. 30 Great Western Coll. 50 Rica Gold.
30 Bilon and Crump. 150 Gladale Quarry. 40 Siltstone Fall.
150 Bituminous Colliery. 50 Hockley Hall. 100 Sierra Buttes.
10 Bolivar Rail. 300 Kapunda. 30 Thorps Gawber.
30 Brighton Aquarium. 30 Lawe's Chemical. 40 West Mostyn.
10 City Offices. 200 Malabar Gold. 30 Whitehaven Iron.
40 Emma. 30 New Sharstone. 10 Wellington Iron.
5 Ebb Vale. 40 Newport Abercarn. 30 Welsh Freehold.

SPECIAL BUSINESS in Pateley Bridge Lead shares.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
77, CORNHILL, LONDON.

Turkish Six Per Cents. of 1854, 1858, 1862, 1865, 1871, and 1873 specially recommended; also Wheal Grenville, Treleigh Wood, Parys Mountain, Wheal Pevor, and Crebor shares.

Business transacted at the following rates of commission:—Foreign Stocks, 1/4 per cent.; and Mining Shares of 2d each and upwards, 1/4 per cent.; under £4, 1s. per share.

GEORGE SIMPSON, STOCK AND SHARE DEALER,
6, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C., will
SELL the FOLLOWING SHARES, free of commission:—
40 Almada, 16s. 3d. 30 East Van, 31s. 6d. 20 Roman Grav., £2 1/2 13s.
50 Bog, 9s. 3d. 50 Flagstaff, £2 1/2 13s. 6d. 20 Richmond, £14 15 16.
70 Birdseye, 21 1/2s. 3d. 20 Gladale, £1. 30 Sweetland Cr., 4s. 9d.
40 Chontales, 12s. 9d. 30 Hington, £1 1/2 6d. 75 St. Patrick, £1 2s. 6d.
50 Chapel House, £2 1/2. 50 Javali, 10s. 20 South Condufford, 25 7s. 6d. (cum div.).
5 Cape Copper, £2 1/2. 70 Ladywell, £2 1/2 9d. 10 Van, £24%.
70 Cedar Creek, 22s. 6d. 20 Marke Valley, £1 1/2 6d. 30 Tankerville, £10 1/2.
20 Devon Consols, £2 1/2 6d. 50 Monydd Gorrdun, £2 1/2. 10 Van Consols, £2 1/2.
75 Don Pedro, 16s. 9d. 20 Pateley Bridge, £2 1/2. 10 West Chiverton.
20 Eberhardt, £2 1/2 9d. 50 Pennerley, £1 1/2.

MRS. GEORGE BUDGE, STOCK AND SHARE DEALER,
4, ROYAL EXCHANGE BUILDINGS, LONDON (Established 26 years),
has SPECIAL BUSINESS in—16 West Chiverton, 60 Monydd Gorrdun, 3 Van, 60 Welsh Freehold, 150 Malabar, 60 Rica, 50 Emma, 100 Gold Run, 50 Old Tin-troft, 30 Grogwin, 50 Almada, 30 Pennerley, 120 Frontino and Bolivia, 35 Crebor, 30 Richmond, 200 West Milw., 50 Devon Consols, 25 Penhalls, 40 Pateley Bridge.
SPECIAL BUSINESS in Chapel House Colliery. A FEW SHARES FOR SALE at lowest price.

P. WATSON, STOCK AND SHARE DEALER,
79, OLD BROAD STREET, LONDON.

Bankers: The Alliance Bank (Limited); and Union Bank of London.

MRS. ALFRED E. COOKE, STOCK AND SHARE DEALER,
78, OLD BROAD STREET, LONDON.

(Established 1853.)

Mr. COOKE can Sell the following Shares, and guarantees delivery, free of commission:—

15 Bampfylde, 17s. 6d. 40 Monydd Gorrdun, 63 3/4. 15 Roman Grav., £12 1/2%.
50 Cathedral, 28s. 50 North Prince Patrick. 20 Saint Patrick, 22s. 6d.
40 Chapel House. 50 Old Treburgett, 4s. 6d. 50 Tyllwyd, 20s.
35 Fir Tree House Col., £5 40 Pateley Bridge.
25 Gladale, 20s. 20 Pennerley, 36s. 3d. 15 West Chiverton.
20 Marke Valley. 50 Parys Mountain, 12s 6d. 25 Wheal Crebor, £2 1/2%.
50 Penstruthal, 11s. 6d. 50 Parys Mountain, 12s 6d. 25 Wheal Crebor, £2 1/2%.

Shares having no quotations affixed may be had at lowest market prices.

WEST CHIVERTON.

The latest reports and advice may be had on application. Capital may be made daily by operating in these shares. Business at close market prices.

Mr. COOKE can transact business in nearly all Coal, Iron, Manufacturing, and Miscellaneous Shares.

On immediate application, Mr. COOKE can recommend shares in a mine destined to rise several pounds per share.

On payment of 20 per cent. deposit shares may be had for end of August account.

WEST CHIVERTON.

The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—

Buyers, Sellers,		Buyers, Sellers,	
Birdseye Creek.....	£ 1 1/2 - 2	Plynlimmon	8s. ... 9s.
Bog	7s. 6d. ... 8s. 6d.	Port Phillip	12s. ... 14s.
Carn Brea	38 ... 40	Prince of Wales	4s. ... 5s.
Chontales	11s. ... 13s.	Richmond	£ 13 1/2 - 14
Devon Great Consols	2 1/2 ... 3	Roman Gravels	12 1/2 ... 12 1/2
Dolcoath	41 ... 43	St. Patrick	1 1/2 - 1 1/2
Don Pedro	14s. ... 16s.	South Carn Brea	2 ... 2 1/2
Eberhardt	7 1/2 ... 8 1/2	South Condufford	5 ... 5 1/2
East Caradon	1 ... 1 1/2	So. Roman Gravels	15s. ... 17s. 6d.
East Van	1 1/2 ... 1 1/2	Sweetland Creek	2 1/2 ... 3 1/2
Flagstaff	23 1/2 ... 25	Tankerville	10 1/2 ... 10 1/2
Gold	11s. 6d.-12s. 6d.	Tincroft	19 ... 21
Hington Down	4s. ... 6s.	Van	24 ... 26
Ladywell	7 1/2 ... 10s.	Van Consols	2 ... 2 1/2
Marke Valley	13 1/2 ... 14	West Chiverton	16 ... 16 1/2
New Querbrada	3 1/2 ... 4	West Godolphin	1 1/2 ... 2
New Rosario	7s. ... 8s.	Wheat Crebor	2 ... 2 1/2
Parys Mountain	12s. 6d.-15s.	Wheat Jane	3 1/2 ... 3 1/2
Pennerley	1 1/2 ... 1 1/2	Wheat Kitty (St. Agnes)	2 1/2 ... 3
Penstruthal	10s. ... 11s.	Wheat Pevor	2 ... 2 1/2

WEST CHIVERTON.

The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—

Buyers, Sellers,		Buyers, Sellers,	
Birdseye Creek.....	£ 1 1/2 - 2	Plynlimmon	8s. ... 9s.
Bog	7s. 6d. ... 8s. 6d.	Port Phillip	12s. ... 14s.
Carn Brea	38 ... 40	Prince of Wales	4s. ... 5s.
Chontales	11s. ... 13s.	Richmond	£ 13 1/2 - 14
Devon Great Consols	2 1/2 ... 3	Roman Gravels	12 1/2 ... 12 1/2
Dolcoath	41 ... 43	St. Patrick	1 1/2 - 1 1/2
Don Pedro	14s. ... 16s.	South Carn Brea	2 ... 2 1/2
Eberhardt	7 1/2 ... 8 1/2	South Condufford	5 ... 5 1/2
East Caradon	1 ... 1 1/2	So. Roman Gravels	15s. ... 17s. 6d.
East Van	1 1/2 ... 1 1/2	Sweetland Creek	2 1/2 ... 3 1/2
Flagstaff	23 1/2 ... 25	Tankerville	10 1/2 ... 10 1/2
Gold	11s. 6d.-12s. 6d.	Tincroft	19 ... 21
Hington Down	4s. ... 6s.	Van	24 ... 26
Ladywell	7 1/2 ... 10s.	Van Consols	2 ... 2 1/2
Marke Valley			

Royal 8vo, 764 pp., cloth; with over 200 illustrations, drawn to scale, and reduced in many instances from working drawings. Price 34s.

ELEMENTS OF METALLURGY;

THE ART OF EXTRACTING METALS FROM THEIR ORES.

By J. ARTHUR PHILLIPS, C.E., F.G.S., &c.,

Comprising REFRACTORY MATERIALS, FIRE-CLAYS, FUELS, &c.; IRON, COBALT, NICKEL, ALUMINIUM, COPPER, TIN, ANTIMONY, ARSENIC, ZINC, MERCURY, BISMUTH, LEAD, SILVER, GOLD, PLATINUM, &c.

" Possesses intrinsic merits of the highest degree. * * * * * In our opinion the best work ever written on the subject with a view to its practical treatment."—Westminster Review.

London: CHARLES GRIFFIN AND COMPANY, 10, Stationers' Hall-court.

Now ready, Part I., price 3s. Fifteen parts,

SCIENCE OF STEAM.

By N. P. BURGH, M.I.M.E. and A.I.C.E.

Each part contains eight pages of letter-press, and two large folding plates, each 19 in. deep, by 25 in. long.

London: 80, Cornhill, and of all Booksellers.

THE NASCENT COPPER PROCESS.

The PROPRIETORS of this PATENT METHOD of TREATING LOW-CLASS SILVER and COPPER ORES are PREPARED to GRANT LICENSES for its USE at LOW ROYALTIES.

There is hardly a Mixed Metal mine in the world but may be made to pay dividends under this system.

All communications respecting the above should be addressed to—

MESSRS. EMMENS BROTHERS AND CO., 8. OLD JEWRY, LONDON, E.C.

SOVEREIGN LIFE OFFICE,

48, ST. JAMES'S STREET, S.W. CITY BRANCH, 122, CANNON STREET, LONDON.

DIRECTORS.—Sir J. R. CARMICHAEL, BART.

DR. ASHURNER,
COL. J. P. BATHURST.

JOHN GARDNER, Esq.
CHAS. W. REYNOLDS, Esq.

SIR J. E. EARDLEY WILMOT,
BART., M.P.

The Report for 1874, copies of which with the statements of account can be obtained on application, shows that a sum equal to 40 per cent. of the premium income was added to the funds, while the general income was increased.

349 policies, averaging £555 each, were issued.

The directors continue to make advances to assurers in the office on liberal terms.

H. D. DAVENPORT, Secretary.

VISITS TO THE MANCHESTER EXHIBITIONS—No. II.

In last week's Journal we gave an account of the objects the Society for the Promotion of Scientific Industry wished to achieve, and we now pass on to a review of the various exhibits pertaining to the mining profession, as displayed at their Exhibition of Appliances for the Economy of Labour.

This exhibition has been grouped into two divisions, the first comprising engineers' and mechanics' tools used in the working of metals, wood, and stone; the special object of the second division being to encourage the development and production of appliances having for their aim the lessening of household labour, the saving of fuel, the improved preparation of food, and the increased healthiness of the home. It will naturally be beyond our province to enter into a discussion of this second division, and as we intend to confine our remarks mostly to mining utensils we shall certainly not be able to enter fully into the nine classes representing engineers' hand and machine tools, boilermakers' tools, nail and rivetmaking machines, lifting appliances, wood-working machines, stone-dressing and cutting machines, sanitary appliances, and miscellaneous, into which the first division is sub-divided. Amongst the first exhibits which greeted our eye in the Exhibition we may mention a combined air-compressor and steam-engine, exhibited by Messrs. Tangye Bros. of Birmingham. In this type of engine the steam and air cylinders are coupled to each end of a crank on a horizontal bed-plate, with cranks set at right angles to ensure the steam to exert the greatest force when the air offers the greatest resistance. To absorb the heat created by compression of the air a small supply of water is allowed to enter the suction-valves at each stroke in the form of spray, and the air-compressing cylinder is, moreover, surrounded with water for the same purpose. We were unable to form any opinion as to the efficiency of this type of air-compressing machinery, for at the time we noticed this machine it was not working, and we were therefore prevented from watching the action of the valves, which generally prove in this class of machinery to work disadvantageously to the efficiency of the machine. At the time of our visit the exhibits of Messrs. Tangye Brothers were daily expected to be supplemented by their so-called Warsop miner's pick, and as this tool seems to supply a generally acknowledged want amongst miners we may well rank this implement as an exhibit. With this tool the miner may carry a quantity of points in his pockets to last him during several weeks' work, thus saving a deal of loss of time, through not necessitating him to leave the mine for repairs. A tapered socket, through which these points project, is secured by a short key, allowing no reasonable handling to disturb the steel point. The head of the pick is made of mild cast steel, with a deep eye to ensure a thorough hold on the handle. We shall have again to refer to this firm of exhibitors, and take leave of them for the present.

The next exhibits which we may mention are those of the Manchester house of Kortings Brothers. Here we find their patent steam-jet ventilators for coal and other mines. The operation of these steam-jet blowers is the same as that of the jet blowers actuated by a steam-jet. A steam-jet issuing from nozzle and traversing another one of larger diameters draws the air, and by reason of its velocity carries the air along, imparting to it a certain speed. These ventilators are made to produce a maximum rarefaction of the air of 3 in. water, and the advantages which are claimed for these steam-jet ventilators are principally that the whole actuating machinery merely consists in a small steam-pipe, thus dispensing with all kinds of driving machinery. The proper working of the apparatus depends on nothing but the required attention of the boiler, and they occupy little space, and may be fixed in any position, either horizontal, vertical, or slanting, upwards or downwards. It is also claimed for these steam-jet ventilators that their simplicity and price make them applicable for temporary work where ventilation has been an exception hitherto—during the sinking of shafts, deep wells, and foundation pits. They are further recommended as a substitute for rotary, fan, or other blowers, or to improve the draught of chimneys in cases where the chimneys have become too small for the work assigned to them; and also, lastly, for the evaporation of liquids and the drying of substances of any kind by drawing hot chimney gases through the liquids or substances. In the erection of such steam-jet ventilators care must be taken to have a drip in the lowest part of the delivery-pipe, and to remove the condensed steam of the steam-pipe, lagging the latter being always advisable. The foul air to be removed by such steam-jet blowers may be drawn through pipes and conduits upon any locality, or forced to wherever required.

Another of Messrs. Kortings Brothers' exhibits are their steam-jet forge-blowers, in which the air-blast is also created by the action of a steam-jet which, issuing out of a nozzle, traverses another nozzle of larger area, thereby drawing in air and also imparting velocity to it. The makers give the following description of these appliances: "The blower is composed of five indispensable parts—air-compressor, condenser and heat-regenerator, water-screen and blower. The first of these parts draws in a moderate quantity of air, and forces the same, under considerable pressure and temperature, through the condenser and heat-regenerator, where most of the steam is condensed. From there the high pressure air has to pass the water-screen, where the rest of the water is isolated. Having passed the water-screen, the high pressure air enters the blowers, issues out of the nozzle, traverses another nozzle of larger area, and

acts the same as the steam acts in the air-compressor—viz., draws in more air, to which it imparts the necessary velocity with which it is to discharge into the fire. The air, which is drawn in by the blower, is first drawn through the condenser and heat-regenerator for the double purpose of first cooling and condensing the blast delivered by the air-compressor, and, at the same time, taking up the heat lost by the compressed air. In this way the moisture of the steam is isolated, while its heat is utilised by heating the blast before it is discharged into the fire." It is recommended to have a blower separate for each fire, and although the same might be placed in any position, it is advisable to make the connection as direct as possible to avoid all bends in the blast-pipe connection. The patent jet condensers, exhibited by the same firm, likewise deserve a word of comment; their object is the same as that of the air-pump condenser hitherto used—to create a vacuum by condensing steam, and naturally, according to the degree of completeness and rapidity of condensation, their effect will be more or less favourable. In favour of these jet condensers it may be said that they perform their work without the expenditure of power which the working of the air-pump entails, and they likewise require no attention in oiling and cleaning. It is also maintained that the vacuum obtained by one of these jet condensers has a greater effect on the increase of power of an engine, and consequent saving of fuel, than the same vacuum would produce by means of an air-pump condenser. The simplicity of these apparatus, and principally the dispensation of air-pumps, make it possible to save, even in high pressure engines, between 20 and 40 per cent. of fuel, where an air-pump condenser would be nearly useless on account of the amount of power absorbed by the air-pumps. The amount of condensing water required by these jet condensers is about 25 times the amount of water evaporated for the use of the engine. In concluding our notice of this firm's exhibits, we cannot help remarking that the restrictions placed on the use of such apparatus can but limit their adoption in many cases, and we should, therefore, gladly notice less stringent regulations in the erecting or mounting of these apparatus.

YORKSHIRE AND DERBYSHIRE MINING, CIVIL, AND MECHANICAL ENGINEERS' EXCURSION AND CONFERENCE.

On Tuesday the Chesterfield and Derbyshire Institute of Mining, Civil, and Mechanical Engineers held their first annual excursion, which was followed by an important conference, on Wednesday, at Nottingham. Upwards of 200 of the principal engineers of the North of England were present, and also many from the South. We observed the following:

Lord Edward Cavendish, Mr. J. Adling (Ilkeston), Mr. George Allan (Sheffield), Mr. R. Allen (Newbold), Mr. S. Alsop (Pinxton), Mr. W. R. Askew (Chesterfield), Mr. S. Bacon (Manor Colliery), Mr. Badger (Dronfield), Mr. I. G. Bass (Sheffield), Mr. A. Baines (Chesterfield), Mr. A. W. Baines (Glossop Colliery), Mr. J. Barkby (Sheffield), Mr. J. O. Bate (Derby), Mr. W. H. Bentley (Chesterfield), Mr. G. J. Binns (Netherseal Colliery), Mr. G. Bond (Chesterfield), Mr. H. M. Brentnall (Langley Mill), Mr. A. W. Brentnall (Eastwood), Mr. M. R. Cammel (Sheldene), Mr. R. S. Chadbourne (Pinxton Collieries), Mr. A. Chambers (Eastwood), Mr. H. Chambers (Rotherham), Mr. R. G. Coke (Chesterfield), Mr. C. Croudace (Clay Cross), Mr. H. W. Dallas, jun. (Shirland Colliery), Mr. H. Davis (Derby), Mr. A. Davis (Derby), Mr. C. Dixon, jun. (Sheffield), Mr. Edward Eastwood (Chesterfield), Mr. T. Evans (Derby), Mr. E. Farnsworth (Riddings Colliery), Mr. J. W. Fearn (Chesterfield), Mr. Henry Green (Derby), Mr. J. G. Greensmith (Eastwood), Mr. R. Hadfield (Sheffield), Mr. Thos. Hancock (Alfreton), Mr. W. Harker (Chesterfield), Mr. J. P. Harper (Derby), Mr. R. W. Harrison (Eastwood), Mr. H. Harrison (Eastwood), Mr. G. Haslehurst (Chesterfield), Mr. W. H. Hepplewhite (Norrigates, near Staveley), Mr. W. Hay (Mansfield), Mr. H. Hill (Riddings), Mr. Holdsworth (Clay Cross), Mr. W. Howe (Clay Cross), Mr. W. F. Howard (Chesterfield), Mr. Geo. Howe (Clay Cross), Mr. R. Howe (Netherseal Collieries), Mr. John Jackson (Clay Cross), Mr. W. W. Jendwina (Chesterfield), Mr. E. P. Knight (Dronfield), Mr. Knighton (Alfreton Ironworks), Mr. H. A. Knighton (Eastwood), Mr. George Lewis (Derby), Mr. S. Lucas (Dronfield), Rev. J. M. Mello (Brampton, near Chesterfield), Mr. W. Oliver (Chesterfield), Mr. C. T. Owen (Chesterfield), Mr. Robert Pender (Langley Mill), Mr. F. Piper (Chesterfield), Mr. R. Ross (Sheepbridge Works), Mr. G. C. Richards (Handsworth Woodhouse), Mr. T. R. Ross (Sheepbridge Works), Mr. J. H. Sanderson (Clay Cross), Mr. W. H. Sankey (Derby), Mr. J. S. Smith (Chesterfield), Mr. R. A. Smith (Derby), Mr. C. Spedding (Clay Cross), Mr. A. H. Stokes (Derby), Mr. R. C. Strelly, jun. (Tibshelf Colliery), Mr. J. W. Tankard (Sheepbridge Works), Mr. W. Tata (Blackwell Colliery), Mr. G. R. Turner (Langley Mill), Mr. T. A. Turner (Langley Mill), Mr. D. Wadsworth (Chesterfield), Mr. J. Ward (Clay Cross), Mr. S. C. Wardle (Alfreton), Mr. Watson (Chesterfield), Mr. W. E. Wells (Eckington), Mr. W. Watson (Eastwood), Mr. W. Wild (Sheepbridge), Mr. T. Wilkinson (Clay Cross), Mr. T. Wilkinson, jun. (Clay Cross), Mr. G. F. Willoughby (Derby), Mr. G. H. Wright (Heanor Hall), Mr. G. W. White (Unstone), and Mr. Henry Wright (Sheepbridge Works).

The district visited was Nottinghamshire, and the excursionists arrived in Nottingham at an early hour on Tuesday morning, and at once proceeded to the Newcastle Colliery, belonging to Mr. Charles Seely, where they had an opportunity of witnessing the operation of Mr. Fowler's tipplers or rickers, which was generally considered an important requisition to coal-mines. They next proceeded to Mr. Seely's colliery at Cilvers Hill, and thence to the large new colliery at Amesbury, branching off the road thither to view the grave of the poet Byron. Subsequently, by the invitation of Mr. Seely, the excursionists dined at Sherwood Lodge, his residence, retiring to Nottingham late at night, after having spent a most enjoyable day.

The Conference was held, on Wednesday, in the Nottingham School of Arts (Lord Frederick Cavendish in the chair), and the President in his address referred to the very satisfactory progress which the Institution had made. In Derbyshire and Nottinghamshire there was a great amount of mineral wealth; indeed, in some respects, as great as in any part of the kingdom, for it was considered that there were seams of coal between Nottingham and Chesterfield which were amongst the richest in England. Thanks to the science of geology, they had now the most reliable means of knowing the various strata and their composition, so that capitalists could, without much risk, prosecute their work of boring with almost certainty as to the result. Happily, geology had now told them what lay before and beneath each, and almost the exact depths at which coal could be found. Years ago their ancestors would not have known what to think of probing the earth at a distance of

2000 or 3000 ft. The fact was they would have considered it insuperable. The use of shafts, pumping, and ventilation at such depths, and without any tolerable certainty of a successful working, would probably have deterred them from continuing their labours. But that was impossible then was now not only a probable but a comparatively easy task.

ONSETTING HYDRAULIC MACHINERY.—Mr. Lupton, North Wales, introduced it in full operation at Cinder Hill on the preceding day and none could fail to be struck with the remarkable results which had been produced.—Mr. Bromley, of Hasland, while expressing his great astonishment at the result achieved by this machinery, was rather inclined to think, from what he saw, that the hydraulic pressure was somewhat excessive, being, as he understood, 250 lbs. to the inch.—Mr. Bainbridge, of Sheffield Nunnery Colliery, having expressed his approbation of easily getting out of order, for supposing the gear happened to be broken, and appreciation of the appliance and its wonderful results, said it had the advantage of not easily getting out of order, for supposing the gear happened to be broken, and the inventor, offered a few remarks in reply.—A vote of thanks to the inventor was passed.

MECHANICAL POWER.—The meeting next discussed a paper which had been previously read before the society, by Mr. Emerson Bainbridge, "On the Application of Mechanical Power in Colliery Operations." Messrs. A. H. Oake, Mr. Owen, Mr. Fowler, and Mr. Morrison took part in the discussion, during which several questions were asked of the author and explained, but owing to the limited space of time allowed, the subject was not fully entered into, and the Chairman suggested that it should be again brought before one of the society's meetings by Mr. Bainbridge.—Mr. Bainbridge, in reply, said one of the most important points yet remained to be discussed, and that was the cost of fuel and labour in mechanical power. He should, therefore, have much pleasure in complying with the request. A vote of thanks having been passed to Mr. Bainbridge, a short discussion took place on "Boring and Boring Machines."

PREVENTION OF OVERWINDING.—Mr. G. H. Wright, of Heanor Hall, next read a paper on this subject, in which he discussed several inventions.

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

An ordinary monthly meeting of members of the Institute was held at the Geological Museum, Dudley, on Tuesday. Mr. JOHN HUGHES (president) occupied the chair, and there were also present Messrs. Thomas Latham (vice-president), Henry Johnson, J. Field, G. H. Dunn, David Peacock, Job Tomson, J. M. Fellows, M. Fletcher, J. Newey, I. Vernon, T. H. Floyd, Alexander Smith, C.E. (secretary), and others. The minutes of the last meeting having been confirmed, Mr. Frank Walter Peacock, mining engineer, of Tipton, was elected a member of the Institute. Certain alterations in the general rules were then agreed to.

Messrs. Hide and Jones, of Pensnett, exhibited their new signal bell for mining purposes.—The SECRETARY expressed the opinion that it was a far better mechanical contrivance than the one now in general use. It was stronger in all its parts, and less liable to fail than the old one.—Mr. DAVIS (mechanical engineer) endorsed the opinion, and said the bell was well constructed, and did away with the balance weights required in the ordinary bell.—Mr. VERNON also concurred in the opinion that it was an improvement upon the old bell.—Mr. HENRY JOHNSON said he was so satisfied as to the simplicity and excellence of the invention, that he would at once give an order to Messrs. Hide and Jones.—On the motion of Mr. DAVID PEACOCK, a vote of thanks was accorded to the patentees, for their kindness in attending and exhibiting the new signal bell.

Mr. ALEXANDER SMITH said that, in compliance with a resolution of the council, he had visited North Staffordshire with the view of making arrangements for the proposed excursion at the end of the month. He first saw Mr. Homer, the managing director of the Chatterley Iron Company, in whose extensive works about 6000 men were employed. Mr. Homer gave him a cordial reception, and devoted the entire day to him. He had also undertaken to draw out a programme. It would, no doubt, be desirable to devote the first day to an inspection of the Chatterley Company's property. He might say that Mr. Homer first showed him specimens of their blackband ironstone in the raw and calcined state, a portion of which was used in their blast-furnaces, and another part sent into South Staffordshire for puddling purposes. The manager generously promised to make a sample case of specimens of ironstone and fossils for presentation to the museum of the Institute. Members who joined in the excursion would have the privilege of inspecting one of the finest furnace plants in North Staffordshire. It had a blowing cylinder 100 in. diameter, and near to this furnace was a pit frame constructed entirely of wrought-iron. Mr. Homer showed him a novel and original system of ventilation which was adopted at one of the pits, and by means of which he did away with air headings. He had a pair of ordinary blowing or blast engines, which supplied air at a pressure of 4 lbs. to the inch, and this was conveyed into the mine through cast-iron pipes, and was liberated and allowed to expand and circulate where ventilation was necessary. They would also see the famous works of Messrs. Robert Heath and Son, which were erected on the Danks principle. It should be added that the Duke of Sutherland had kindly granted permission for the members to visit Trentham, and that they would have an opportunity of inspecting the great Fenton sinking. They were sinking with a pair of 22-in. cylinder engines. They had two shafts 16 ft. diameter, and they had gone down 240 yards. Permission had, moreover, been granted to visit Minton's celebrated pottery works, and the "big" pit at Hanley, belonging to the Earl of Granville. Here they had sunk to a depth of something like 500 yards, and in the workings had excavated a large place, which they had arched over, and from this part had erected another plant, and had gone down another 200 yards. Several of the members having expressed their satisfaction at the attractive arrangements made, the meeting terminated.

KITCHEN BOILERS AND HOT BATHS.

At the meeting of the Association of Municipal and Sanitary Engineers and Surveyors, Mr. W. H. BAILEY (Salford) read a paper on "The Prevention of Kitchen or Bath Boiler Explosions, and the Bursting of Water-Supply Pipes in Winter," in which he said every winter in this country there were many fatal accidents caused by the explosion of what were known as circulating or bath boilers; there was also a great amount of damage done to house property, and some domestic misery created by the bursting of water pipes, caused by the water freezing in them. There seemed to be among many people an impression that domestic boilers often exploded through a deficient water supply. He believed that was not the case, and it would be very difficult indeed to demonstrate that any accidents had occurred from that cause. A great number of boilers burst every year which were unreported, because not attended with fatal results. Of those which had been reported during the past six or seven years, half appeared to have exploded through stoppage of the circulating pipes by ice, and the remaining half had been caused by the fixing stop-taps in those pipes. Having mentioned a number of accidents through boiler explosions, Mr. Bailey said the natural question was what would prevent the destruction of life and property? He had no hesitation in saying that if safety-valves had been fixed every one of the accidents would have been prevented. And as the ordinary lever safety-valve would possibly become inoperative in course of time, a little pendulous safety-valve of the Cowburn type had been recommended, as not unlikely to get out of order, by Mr. Fletcher, of the Steam Users' Association; and if safety valves were fixed on the boiler, he thought there was no objection to the use of taps in the circulating pipes, as they were undoubtedly useful in case of accident. Weak plates of white metal had been recommended instead of safety-valves, which would burst at low pressure. He had made extensive experiments on these plates, and had burst a great number by actual steam pressure; but he found that he never could get two alike out of the same mixture of metal. A word about copper cylinders preventing explosions. Circulars had been issued by ironmongers in which it was distinctly stated that these things rendered an explosion impossible. That delusion, which had such a firm hold in the minds of many people, demanded some attention. A copper cylinder fixed to a boiler made it safer from those explosions which are caused by ice in the pipes. A copper cylinder only delayed the danger a few hours at most in severe winters, and its utility ended at that for preventing explosions. Owners of house property would do well to have stop-taps fixed in the bottoms of bath boilers to enable the water to run out when the houses were not tenanted. Several boilers have been cracked by the accumulation of ice inside them last winter in empty houses. He was not there as the advocate of any new system of patented mysterious pipes, but simply to say that a safety valve in every case mentioned would have prevented

JULY 10, 1875.

743

THE MINING JOURNAL.

accidents. If this be true, what was the duty of the municipal authorities? It seemed to him to be very clear and straight before them. Action of some sort was imperatively needed, either by the imperial or municipal authorities, in order that these things might be fixed in a safe and proper manner. Closely allied to this subject was the bursting of water-supply pipes in frosty weather through the expansion of ice; and he would endeavour to describe a little plan which was not patented, and which might be used with some benefit. Hydraulic cylinders that would bear a pressure of 5 tons on the square inch had been cracked in Manchester warehouses by the water freezing in them. If this were so, it would be apparent that stronger pipes than those at present used would not prevent the evil; therefore, if we could not get pipes of a material that would bear the pressure of ice, the next best thing was to prevent the ice accumulating. It had occurred to him that if a little gas jet cylinder was used it might keep the water warmer than freezing point, might be constantly kept burning, which would cause the water to ascend, and thus promote a slow circulation. If, however, a separate pipe, 1-in. bore, were to be connected to the top of the cylinder, and then taken and connected to the highest and coldest part of the water main, it would be made more effective, as the circulation of warm water would be then complete.—The CHAIRMAN said if anything could be done to prevent boiler accidents in houses, and save the lives of the people, great good would be done.—The thanks of the meeting were given to Mr. Bailey for his paper.

NOTES ON FOREIGN MINING LAW.

No. III.—SWEDEN.

By the Mining Law of Jan. 12, 1855, which is still in force in this country, the following may be the subjects of a Mining Concession:—

1.—All metals and ores, whether they are found in rock or earthy strata, or in the bottoms of lakes, in mosses and bogs.

2.—Pyrites, plumbago, and coal.

3.—So-called *varp* (waste or refuse ore) at abandoned mines, which contains any quantity of the minerals included in sections 1 and 2. Where a concession is applied for, in the case of a deposit, situated within 100 fms. of a dwelling house, or buildings or enclosures belonging to it, the previous consent both of the owner and legal occupier of the house, &c., is required. Nor may any concession be granted for a discovery within 50 fms. of a place for which a concession has already been granted, but of which the boundary has not been fixed.

A mining concession (*Mutsedel*) is obtained by written application to the mining superintendent (*Bergmästare*) of the district. The application must contain, along with the name, residence, and occupation of the applicant, a statement of the species of mineral for which the concession is asked, and an exact indication of the situation of the discovery. The concession, when obtained, must be published by being publicly read in the church of the parish within which the mine is situated within two months of the time when it was issued on peril of forfeiture. The first applicant is preferred; where several apply on the same day all have an equal right, unless it can be proved that some of them obtained information from another or others of the applicants, in which case the latter are preferred. No concession is valid for a discovery for which a concession has previously been granted, unless by a legal process the first concession has been declared forfeited on account of the mining having been neglected, but in no charge of this kind is reference permitted to anything that happened further back than two years before the complaint is made. The holder of a concession is entitled to access, and to use as much ground as he requires for carrying on mining on giving compensation to the owner by an annual payment until the boundary of the concession is defined. He must also give the owner compensation for permanent damage in case he abandons his concession before the boundary is fixed. The owner of the ground is entitled to a copy of the concession (*Mutsedel*), and to security for damages, if he requires it, before work is commenced.

Mining must be commenced within one year from the date of the concession, and must be carried on to the extent of blasting 1 cubic fathom of rock, or the removal of 4 or 5 cubic fathoms of earth, on each concession per annum. The owner of the ground has a right to take part in the mining to any extent up to one-half, or in the case of *varp* to one-fourth, bearing at the same time a proportionate share of the expenses. He must, however, claim this right at or before the time when the limits of the concession are defined, otherwise it lapses. The owner of a mine may follow ore beyond the boundary of his concession, being bound to inform the owner of the adjacent ground or concession, who in this case is entitled to participate in mining to the extent of one-fourth, but must put in his claim within six months from the time when he received information.

The holder of a concession must make a written application to the mining superintendent for *Utmol*, or settlement of the boundary, in the case of lake or bog ore, or refuse ore (*varp*), within 12 months, but in other cases, as soon as the deposit has been sufficiently uncovered to admit of its quality, position, extent, and breadth being judged of, notice must be given to the ground owner, and published in the church of the parish at least a month before of the time when the *Utmol* is to be fixed, which is done by the mining superintendent of the district, or a substitute, assisted by two of the local commissioners, who are periodically elected for dividing landed property, &c., and who assess the value of the land required, which may not exceed the highest price that has been paid for land of the same kind and quality in the neighbourhood. The price fixed must be paid within three months, but if the owner of the ground avails himself of his right to take part in the mining, the amount he is entitled to receive is diminished to the extent of one-half if the share which he claims is equal to that of the concessionaire, but if his share is smaller to a less extent in proportion. If the land is mortgaged the payment falls to the holder of the mortgage.

A single concession cannot have a greater extent than is equal to a square with a side of 100 fms., except in the case of coal, in which the side of the square is 200 fms. of bog ore, in which the side of the square is 300 fms. of lake ore, in which the concession may not embrace more than one lake, or about nine square miles (English), and of *varp*, in which the extent is left undefined.

Mining is carried on under the supervision of the Mining Superintendents of the various districts, to whom reports are also made annually of the quantity of ore that has been raised during the preceding 12 months. The mining superintendents have the power of settling all questions relating to mining, but an appeal lies from them to the Berga Afdeling, or Mining Department of the Board of Trade (Commerce Collegium).

If the holder of a concession wishes to abandon his mine he gives notice to the mining superintendent, who causes the fact to be published in the churches of the hundred, and the first person who applies within four months has a right to take over the mine on paying the previous owner the value of his plant, with the exception of the timbering and constructions necessary for the security of the mine, which the first owner must leave in good order. A person or company owning shares in a mining field has a preferable right to drive an adit level through it, and the party doing this, with the permission of the Mining Office, has the following privileges:—

1.—The whole of the discoverer's and the half of the ground owner's right to any minerals not previously worked, which may be discovered in the course of the work, if they do not lie within a concession previously granted.

2.—The same right if the minerals are within a concession, but only until the holder of the concession meets him with a gallery.

3.—A right to one-fourth of the profit of mining in the case of ore already worked, which he may meet with, but only until the owner meets him with a gallery.

4.—Two-thirds of the saving which may arise through his operations in the unwatering of any mine in the field, and in the raising of ore and rock in the absence of a previous agreement, the value of saving to be assessed in case of dispute by the mining superintendent.

A mineowner, on making application to the mining superintendent and showing cause, may obtain permission to suspend mining for a period of one to three years, which may be prolonged for two years

more, and on application to the supreme authorities for a further period not to exceed 10 years from the commencement. By Royal Ordinance of April 12, 1872, foreigners are required to obtain the permission of the Government to hold mining concessions in Sweden.

NORWAY.

The Mining Law of July 14, 1842, specifies as subjects for concessions all metals and ores, with the exception of lake and bog ore. Coal is thus excluded, though some is found in Norway. In order to explore on ground belonging to another a license is required, which is issued by the proper official, and is valid for one year, and for the district in which it is issued. No exploration can be made without the consent of the owner and occupier in cultivated land or meadows, or within 200 ft. of a dwelling house or other building. If the explorer makes a discovery he must, in order to protect his right, give notice of his discovery to the Governor of the province, or the Magistrate of the district, and cause it to be published in the manner directed by law. The discoverer has a right to obtain a concession on making application to the Mining Superintendent within 18 months of the time when notice was given of the discovery, the application being accompanied by a sample of the mineral. If a concession is not made within the time specified the discoverer's right lapses. The holder of a concession is entitled to a certain area, which is fixed according to circumstances at a maximum of 150 fms. in length in the direction of the mineral vein, and 3½ fms. on each side of it, or in the form of a rectangular parallelogram, containing at most 2500 square fathoms, in which latter case the boundaries underground are perpendicular; within this area the concessionaire is exclusively entitled, with the following exception, to work any mineral which may be the subject of a concession.

The owner of the ground is entitled to take part in the mining to the extent of one-tenth, provided he makes a claim in the manner specified by law, otherwise it falls to the concessionaire. The ground owner who claims his share must bear a proportion of the expense from the beginning, from which he is also entitled to his share of the profit. The owner of land cannot be compelled to give it up to the mine owner except for roads in those places where explorations cannot be carried on without his consent. For the ground he must give up compulsorily he is entitled to full compensation, and when it is no longer required for the purpose for which it has been parted with it returns to his possession.

If a mine is not continuously worked the right of ownership lapses, unless permission to suspend work is applied for within a month after the work was stopped; such permission, however, is not required during the first year after the granting of the concession, nor in the case of new mining undertakings during the winter months of the three first years. Foreigners may hold mining concessions in Norway without special permission being required, as in the case of Sweden.

FINLAND.

In this semi-independent Principality the law of May 25, 1857, strongly resembles the Swedish law of 1855, Sweden standing in relation similar to that of the Mother Country to Finland, though the latter has been for a considerable period a dependency of Russia. The law of Finland, however, excludes coal, and includes, besides the minerals which by the Swedish law may be the subjects of a concession, roofing slate, marble, porphyry, and similar rocks and minerals, which may be utilised by polishing, and common limestone and quartz, when they are required for use as fluxes, or for lining furnaces in smelting operations.

Meetings of Public Companies.

COLONIAL BANK.

The seventy-fifth half-yearly general meeting of proprietors was held at the London Tavern, Bishopsgate, on Thursday,

Mr. T. D. HILL in the chair.

Mr. JAMES CLARK (the secretary) read the notice convening the meeting.

The CHAIRMAN said that before requesting the secretary to read the report he must allude to the sad event that had happened since their last meeting—the death of their late chairman, Mr. John Gurney Hoare. The active part which he had always taken in the affairs of the bank rendered his loss a heavy one, which the other proprietors would feel as much as himself. At the last meeting he informed them that Mr. Hoare had placed his resignation in their hands, and he was glad to say that he had afterwards had the opportunity of consulting with Mr. Hoare, and telling him he had been called to the chair, and Mr. Henriques to the deputy-chair, and the proprietors would be glad to learn that the appointments met with his entire approval. The subjoined is the report:—

The directors have now to submit to the proprietors the usual statement of the debts and assets of the corporation on Dec. 31, which exhibits the net profit for the half-year ending at that period:—

Circulation	£ 400,117 15 0
Deposits, bills payable, and other liabilities	2,658,333 7 2
Paid-up capital	600,000 0 0
Reserve fund	79,000 0 0
Balance of profit from last half-year	2,362 19 5
Net profit for the half-year	47,355 14 10
Total	£ 23,817,219 16 5
ASSETS.	
Specie	£ 326,073 1 4
Due to the bank in the colonies on bills discounted and purchased (including those past due), &c.	1,626,235 12 7
Due to the bank in the colonies on current accounts	43,614 15 5
Due to the bank in London, on bills remitted, cash at bankers, &c.	1,810,721 4 5
Bank premises and furniture in London and colonies	10,575 2 8
Total	£ 23,817,219 16 5

It will be observed by the above statement that the profits of the bank have been sustained, notwithstanding that the period embraced in it was one of depression for all interested in sugar production in our colonies. The directors are happy to report that the present year's crops have proved large, but, on the other hand, low prices continue to rule for sugar. It is some satisfaction to know, in reference to the export bounty system existing on the continent of Europe, that delegates of the countries interested have recently agreed to the terms of a new Sugar Convention, which, if assented to by their respective Governments, will, it is hoped, put an end to the unequal competition with which our refiners and West Indians have had to contend for some time past. The directors have had the pleasure to present to their officers and clerks a gratuity of 10 per cent. upon their salaries, which they have no doubt will meet the approval of the proprietors.

From the net profit of the half-year, which amounts, after making provision for bad and doubtful debts, and for income tax, to ... £ 47,355 14 10

Has to be deducted bonus to staff, amounting to £ 3,110 19 0

Leaving £ 44,044 15 10

And adding the balance of profit from last half-year... 2,362 19 5

Leaves the amount disposable of £ 46,407 15 3

Out of which the directors have the pleasure to recommend that an ordinary dividend of 6 per cent., and an extraordinary dividend of 1½ per cent., be made upon the paid-up capital of the corporation, for the half-year ending Dec. 31, which will absorb 45,000 0 0

Leaving £ 1,407 15 3

Of which the directors propose to carry 1,000 0 0

to the reserve fund, increasing it to £ 50,000, and the

Balance of £ 407 15 3

forward to next half-year.

The CHAIRMAN said that it was with much satisfaction that the directors were enabled again to recommend their usual good dividend, notwithstanding the depression which had existed, but he could assure them that it had not been earned without great anxiety and hard work. The bonus to the staff had, as they had heard, been paid, and he was sure had been richly deserved; he trusted that the future business of the bank would be so prosperous as to enable them to be equally liberal when the next triennial period arrived, and when the proprietors would no doubt be equally willing to recognise useful services. The year had not been so prosperous for the sugar growers in the West Indies as it had for themselves, and he feared there would not be any permanent improvement in sugar while the present policy of foreign States continued. At present, protection shut them in on every side—in America and in France especially; and when the West India sugar came here it had to compete with the bounty-fed sugar from the Continent. Our sugar

growers and sugar refiners both suffered from this position of affairs, but he trusted it would not be of long duration. Lord Hampton was to present petitions from Jamaica and Barbadoes to-morrow, and would ask a question of Lord Derby which he trusted would have the effect of causing the whole matter to be well considered, and a remedy found. He, however, hoped that the shareholders would meet next half-year to receive an equally satisfactory statement.

The report was then put to the meeting and carried unanimously, as was also the resolution sanctioning the payment of the dividend. Upon the proposition of the CHAINMAN, seconded by Mr. HENRIQUES, Mr. Miller was elected director in the room of Mr. J. Gurney Hoare deceased, and Mr. C. R. Gurney Hoare was appointed auditor in the room of Mr. Miller, promoted; Mr. Henriques remarking that Mr. Miller had been an auditor of the bank for many years, and would doubtless prove of equal value to the proprietors at the board, and that Mr. C. R. Gurney Hoare was the son of their late respected Chairman, which was a sufficient guarantee that he would be efficient as an auditor.

A cordial vote of thanks to the Chairman and directors, proposed by Mr. BRAVO, and seconded by Mr. G. C. HARRISON, terminated the proceedings.

[For remainder of Meetings see to-day's Supplement.]

THE COURSE OF BRITISH INVESTMENT AS AFFECTING THE MINING INTEREST.

There are few subjects of more importance than the present course of investment. Large masses of capital are seeking employment in this country and held here for which use is desired anywhere, and in any form that is fairly secure. It is frequently the case that it is invested at the very low rate of interest which the funds return, or left on deposit interest in our joint-stock banks. Both these forms of investment must inevitably diminish. Government, the City, the Board of Works, the India Government, &c., are more intent on diminishing than incurring debts, and public feeling goes with the authorities, even independent of those upon whom the burthen of obligation falls. A very strong opinion has sprung up in the financial world against large banking interests on deposits. Holding heavy sums on which considerable interest has to be paid is a temptation to bankers to run risks; it is, in fact, a necessity for them to do so in order to make something out of the moneys so deposited, and sometimes it is not easy without such risks to cover safely the deposit interest they have to pay. It may be safely averred from the opinions of bankers and public opinion that the old custom of paying 1 per cent. under the Bank minimum to depositors will be discontinued, the Westminster Bank leading the way. No person can be intimately acquainted with the leading financial journals without perceiving that the opinion of our writers, monetary philosophers, and of the general public turns in that direction.

What then will investors do with their money? A greater number of persons have money to invest in the United Kingdom who cannot turn it to personal account than anywhere else in the world—they cannot farm, trade, nor manufacture, but they are willing to incur reasonable hazard for reasonable dividends. What is the best course for such persons to pursue? There are undoubtedly several channels for letting out money to make money, but we do not know any one which offers better prospects than legitimate mining. A very able and popular journal, at all events popular in the City, has very recently called this in question, alleging "that mining as a whole does not offer good opportunities for investment, for one prize there are many blanks, although it is to be admitted that when mines are successful there are no other companies in which profits of such vast magnitude are made." The admission is of importance and is a truth which all experience confirms, but it is not correct that mining, as a rule, is unsafe. On the contrary, what other form of investment is there to which a similar objection may not be taken. The committee on foreign Government loans has not yet made its report, but enough has been shown from the evidence as given to the public from the short-hand notes of the reporters to prove that, however known to the initiated, the public generally was ignorant of the dangers incurred by lending to foreign Governments. There was a general impression that Governments would not be as likely to ignore their obligations as private persons, or so likely to become bankrupt as companies. These delusions ought by this time to be swept away. Governments of all forms, monarchical and republican, have mismanaged their resources, and proved themselves dishonest. Some paid nothing, others plundered the securities hypothesised, one set of them hypothecated the very same securities over again to various lenders. Sometimes part of the interest has been confiscated, sometimes part of the principal. Not a few of them have offered to pay in depreciated paper what they borrowed in gold, and the cases are too many where bold, open, unqualified repudiation took place.

Besides the dangers to the investor from the borrower, there are others placed in his way by the abettors here of the borrowers abroad, which are very great. When the loan is "brought out," by a "respectable firm," the mass of English investors fancy they are secure. Generally the financial house by which the loan is introduced abstains from recommending it, and simply introduces it, but the introduction by a man in such a banker's or financier's position is interpreted as a guarantee that in his opinion, at all events, the undertaking is sound, and he is supposed to be very honest, very experienced, and shrewd exceedingly.

We have no losses in mines and mining comparable for a moment with those incurred by such loans, and the worst of the matter is that Governments which have paid hitherto are uncertain for the future; we constantly hear of their paying coupons by stratagem, and of annual deficits met by advances on the part of syndicates at ruinous expense, involving those States in deeper and deeper indebtedness.

Then, again, our debtors may be at war with us, or at war with one another, or revolution rage within their confines; and bad seasons, commercial depressions, are just as patent to the disadvantage of Governments as individuals, and more so than in the case of select companies of individuals.

Insurance companies are sometimes very good investments, but they have not proved to be safer than mines. The occurrence of an epidemic or endemic, heavy fires, and incendiary, are risks from which mines can suffer very little, or nothing at all.

Assurance companies have still greater perils to contend with than insurance. In our seaboard cities shares in ships were deemed profitable, and were extensively held by persons of moderate means in those places; but the risks were found to be so imminent and numerous that a general desire sprang up to transfer them to the assurance offices, and that avocation has of late years suffered severely.

month. There have even been some cases where the lords' dues have been reduced lately, but we cannot say the instances are numerous. Yet in bad times the dues press heavily upon struggling concerns, and sometimes press them out of being. It would be an easy thing to point out a long list of good mines the chief impediment to the prosperity of which is the tax of the lords. This is now, however, being calmly discussed by all concerned in practical mining, and greater liberality is indicated. Investors cannot, therefore, say that the general spirit of economy connected with manufactures and commerce has not found its way into mining.

We would remind investors of another great fact in connection with mines. No department of enterprise is so sensitive to the value of money. "Cheap money, dear metals, and prosperous mines"—that is indubitably true. Money can be had to any amount on reasonable security at 3 per cent., and in another week or so the Bank minimum will be $\frac{1}{4}$ —probably again reduced, and the open market proportionately lower. The Bank of England contains a stock of bullion amounting to 27,000,000.—the greatest stock of gold in the world except in the Bank of France. The reserve of coin and notes together is about 14,000,000., and the proportion of reserve to liabilities is 39 per cent., and must inevitably advance. Now is the time for men of sense, spirit, and enterprise to bring new mining fields into active work, and revive many a fine property which would respond with an excellent remuneration to the skilful hand and the reasonably free purse, and the complaint would cease to be made that the course of investment takes leaves mining behind. It is a positive fact that there is more disposition on the Paris Bourse to deal in, and invest in, English mines than there is on our Stock Exchange. This is so far encouraging that this practice is likely to spread on the Continent, and the attention of English capitalists will be turned in the right direction.

Original Correspondence.

"EMMA MINE—ITS PAST AND PRESENT MISMANAGEMENT."

SIR,—In glancing over a pamphlet entitled as above I see, among other things done in Utah in the interest of English mine owners, somebody paid debts, &c., left by a former manager of Camp Floyd out of his own pocket, in which were included secretary's salary. Now, as I can prove the secretary is still unpaid, I think it only right that I should correct any error in my power so to do in Mr. Sewell's pamphlet. I should not have noticed this error, but my eye was caught by the words Camp Floyd and secretary, page 44.

G. J. BOUSFIELD,
Resident Secretary Camp Floyd S.M.C.

THE CLIFTON SILVER MINING COMPANY (LIMITED).

SIR,—As your correspondent "Shareholder" evidently did not try to state nothing but facts, I am sure you will permit me to correct numerous misstatements contained in his letter.—1. The ore of the mine contains upwards of 30 ozs. of silver per ton; and, although you may separate the lead from the mundic, and that from the rock, there has been found in practice no corresponding enrichment of silver in either, the reason being that the silver is proved to be contained equally in rock, mundic, and lead.—2. Mining in Colorado and mining in Cornwall are doubtless different. Mr. C. S. Richardson, on Jan. 23, 1872, thus expresses himself: "I think you have two gentlemen here to manage your affairs—Mr. E. J. Dowlen and Capt. Rodham—who are doing their whole duty." "I do not know of any place in the world more notorious for inefficient and corrupt mining agents than Colorado."—3. Capt. Rodham was at the mine ten months before he died. Four months previous to that event the directors decided to supersede Mr. Dowlen, and did so as quickly as circumstances permitted.—4. The delay in providing Mr. Dowlen's successor arose principally from difficulty in getting a suitable successor. Your correspondent is most unjust to an absent man—Mr. W. McCree—whose qualifications were fully explained in the annual reports which accompanied the balance-sheets of 1872 and 1873.—5. Your correspondent's pet manager, a Colorado miner, did manage to sell some ore—a part of which has not yet been paid for—expended the balance of the company's funds, ran the company into debt, and advised the suspension of operations. His failure may clearly be traced to the fact that 30-oz. ore is not saleable in Colorado at a price that will pay wages, salaries, &c.—6. Upon representations made by the vendor, backed by samples of ore and their assay (taken here), a contract was entered into which has simply failed because the bulk of the ore is too light to pay the costs of mining and of transportation to the smelting works.—7. The meeting which authorised the issue of 4000/- debenture bonds was largely attended. At the subsequent meeting held to confirm the resolutions two shareholders voted against confirmation.—8. The Pittsburg Company did not subscribe 500/-; but because shareholders did not come forward with sufficient to provide the minimum the directors had determined to allot, an English gentleman, interested in the contract, was urged by the directors to subscribe 500/-, and after a time he consented on condition that he had nomination of the manager of the mine.—9. The new manager was previously unknown to the Pittsburg Company. His salary was \$250 per monsoon, and a commission of \$1 per ton of ore shipped under the Pittsburg contract, not per ton of ore raised.

There are other parts of your correspondent's letter equally fallacious, but which I have not time to notice. I am sure that the directors do not wish to wind up the company if it can be avoided. If shareholders will attend to the affairs of the company, and subscribe the balance of debenture bonds—2350/-—the company would be able to adopt the course advised—put up a furnace at the mine, roast the mundic ore, and subsequently smelt it down to pigs, which in that concentrated form would not only pay to ship to Pittsburg, but also transform the company from its present to a dividend-paying condition. The ore is there in immense bodies; of that there is no doubt.

In conclusion, let me ask your correspondent and all shareholders to seek for information at the office of the company, where the facts can be obtained and vouched for by a secretary who has voluntarily given his services for the past two years.

F. ANDREWS.

(For remainder of Original Correspondence see this day's Supplement.)

MINING IN CARDIGANSHIRE.—The six months just past have brought no change to the depression in this once thriving district. Mine after mine has ceased working, or, worse still, gone into liquidation. A reference to our advertising sheet will show that the well-known and ancient mine of Escair-hir is offered for sale by private contract. This property has for some time past been worked by a few gentlemen, although registered as a company with limited liability. A very fine bunch of ore was met with of no great length, but from the 10 fms. in depth which were taken away about 8000/- worth of lead has been sold and the money spent in completing the plant of machinery and carrying down the shafts to lay open deeper levels; this has just been finished, but no ground has been tried at the deep points, nor has the lode even been cross-cut for its width. This does seem cowardly; it is not for us to pry into the motives which have induced the present proprietors to sell, but it certainly is not from any failure of the mine. We believe that the same gentlemen were interested in a property near Talybont, which certainly did prove a complete failure—in fact, there never was at any time anything to warrant such a large sum having been spent, as the place had long been condemned by most practical men who had seen it. The stoppage of Escair-hir leaves Tann-y-all the only mine working in the district. This property, which is also worked by a few gentlemen, is a good sample of what a judicious outlay of capital on a well selected mine can effect. A very fine course of ore was laid open in the 12, about 15 fms. long, worth at least 2 tons per fathom, the rib of lead being from 10 in. to 2 ft. wide, of solid ore. A stone taken from it, now to be seen at the Queen's Hotel, Aberystwith, less than 1 cubic foot, weighs over 1 cwt. The main shaft has been expeditiously and economically sunk from the adit to the 22, all within the past six months, and when this fine course of ore is laid open at the deep point this mine will be making large returns of ore per fathom. This ought to induce capitalists to come into the neighbourhood, and some of our overworked London men could not do better than take a run down to this picturesque neighbourhood for a few days. There is a very comfortable inn at Tieridol, kept by Mr. and Mrs. Jones, or there is a large hotel at Borth, which is on the sea, about three miles distant from the principal lines, but Escair-hir is about 10 miles from Borth. There are many mines, once very prosperous, now stopped; for instance, Alt-y-Crib, Blaen Caeran, Erglodd, Penpont, Penybank, &c., all properties from which large quantities of ore have been sold; and if mines could be worked by our forefathers at a profit, as they undoubtedly were, surely in this age

of improved machinery and explosives, and with the appliances to go to great depths which did not then exist, these mines ought not to be idle. There is no doubt but that a time will come when mines will again become brisk, and then those who have had the foresight to invest in the present dull time will reap their harvest.

THE MINERAL RESOURCES OF THE SOUTH-WEST OF IRELAND—NO. XII.

[FROM OUR SPECIAL CORRESPONDENT.]

From Dunmanus Castle east to the western slope of Mount Corin, a distance of 10 or 12 miles, the district, with one slight exception, is unexplored. Numerous ledges, however, pass through it. Casbellane Hill, near Dunbeacon, a little cove in Dunmanus Bay, rise to a height of 600 ft. above the sea level. Some time ago a deposit of the sulphate of barytes was discovered at the eastern end of Casbellane Hill, running in a north and south direction, and from which many cargoes were shipped to Liverpool and other places. The works were successfully carried on for some time by a private gentleman, and had he continued the works there is every probability that they would have still paid well. He, however, disposed of the entire property, and a company was formed—the British Barytes Company (Limited), with a capital of 50,000/-, in 12,500 shares of 4/- each, to work the mine on an extensive scale. Capital to be called up, 30,000/- The prospectus states that "the mines, plant, &c., become the property of the company for the sum of 20,000/-, of which 16,000/- will be taken in paid-up shares of the company, and the remaining 4000/- in cash. The vendors also agree not to sell 2500 of their fully paid-up shares until an annual dividend at the rate of 10 per cent. per annum has been paid; that it is intended every quarter year to take stock, to issue a working report to all shareholders, and to pay a quarterly interim dividend." The following are extracts from the report given by a mining and manufacturing engineer, who was commissioned on behalf of the company to examine the properties, and to report on the manufacture of barytes, and on the commercial prospects of the undertaking. "The vein of barytes averages about 6 ft. in breadth, usually fine in colour, compact, free from crystalline cavities, which hinder fine grinding. I consider the grinding barytes of superior quality to most of what appears in the market. The mines are intrinsically valuable. The barytes would be delivered to the consumer as cheaply as from any mine. I see no reason why, by developing the mines in a systematic manner an output of 300 tons a week may not be made, and as a vein of this character (a true fissile vein, descending almost vertical across the strata) has never been known to fail, I may safely say the produce will be permanent. I find there is no difficulty as to sales of produce—the prices range from 3/- common to 4/-, superior, and to 5/-, 10/- for finest. As to the profits that could be realised from the business, they may be safely taken at an average of 20s. per ton; taking the quantity produced at only 200 tons a week, this would give upwards of 10,000/- per annum net profit." At the time this eminent mining and manufacturing engineer wrote his description of the mine, the breath of the vein, permanent produce, &c., it was full of water. He must, therefore, be a wonderfully clever man, and by the same process of reasoning will be able to foretell the result of the expedition to the North Pole. A greater man than he was soon, however, on the ground—a Doctor P—k—s. The mine was still full of water, and the estimated returns by the learned doctor were so enormous that I almost fear to trust to my memory, but as well as I recollect it was 20,000 tons a month; but as the doctor forgot many things he said and did in the locality, I may possibly have forgotten the exact amount, but it is near enough. The mining and manufacturing engineer eventually sent over a steam-engine for pumping and hauling stuff; the cylinder was 4 in. diameter and 12 in. long; and as Paddy Sullivan said "when it went to work it would not move, the little baste"; in fact, it could not pull an ounce of stuff, and a horse-whim was immediately erected, as certain buckets which were sent over, precisely similar to those used in boats for dredging mud in rivers, were found to be useless. Although Paddy said they "wor a mighty fine invention entirely for cooking pratties" Here is another example of what is called "Mining in Ireland."

AMERICAN METALLURGY.

American metallurgical industry shares the depression which at present affects the American railroad interest; but the development of American metallurgy is, nevertheless, one of the great industrial facts of the epoch. It is this development of the American iron trade which has aggravated the difficulties of such concerns as the Rhymney, the Ebbw Vale, the Aberdare, and the Nant-y-Glo and Blaina Iron Companies; and we are not altogether clear that the almost complete loss on our part of the American outlet for our iron must not be regarded as permanent. In spite of all the manifold difficulties against which American ironmasters had to contend last year, they produced in 1874 no less than 2,689,413 tons of pig. This total was certainly below the production of 1873, which attained an aggregate of 2,868,278 tons; but it, nevertheless, presented an imposing importance, and it seems possible, if not probable, that the production of pig in the United States will experience a sensible revival in 1875. The means of production are being extended, at any rate. Thus, in February, 1874, the United States had 701 completed blast-furnaces, of which 303 were in blast and 391 out of blast. Since February, 1874, the number of furnaces out of blast has slightly increased; on the other hand, 38 new furnaces were completed in 1874—a fact which shows that more and more capital is being devoted to the production of iron in the United States. No fewer than 46 more furnaces have also been either completed this year or are still in course of erection. In spite of the great dullness of the times in the American Republic in the course of 1874, the following States made more iron last year than in 1873:—Maine, Vermont, Massachusetts, New York, Virginia, Georgia, Alabama, Texas, West Virginia, Tennessee, Ohio, and Michigan. The district which presented the greatest increase last year was the miscellaneous bituminous coal and coke region of Ohio. The vast territory not yet elevated to the formal dignity of a State, but which, under the name of Utah, is principally associated in England with Brigham Young and Mormonism, made its first pig-iron last year, having produced 200 tons of charcoal-made. After a rather long rest, Oregon, with one furnace, made 2500 tons of pig with charcoal last year. Texas produced 1012 tons of charcoal-made pig last year. On the other hand, the production of pig appears to have ceased last year in South Carolina, which has as many as eight furnaces, and in Minnesota, which has one.

The far from important decline which appeared in the production of pig-iron in the United States last year, as compared with 1873, was wholly attributable to the languor which characterised the American business world generally last year, and the American railroad interest in particular. The resolution to turn to good account the iron minerals with which certain States abound was not at all weakened last year. On the contrary, 1874 witnessed an increase in the means of production. The quantity of foreign pig iron imported into the United States was also largely reduced last year, having been brought down to 61,165 tons, against 154,708 tons in 1874, and 295,967 tons in 1873. Not only has the large quantity of iron now made in the United States nearly driven foreign pig from the American markets, but the Americans have also begun to export pig to their neighbours. Thus, in 1874 the total exports of pig from the United States were 16,039 tons, against 10,104 tons in 1873, and 14,77 tons in 1872. The furnaces which have been recently constructed in the United States have been of a large and improved type, and their construction will enable pig to be produced in the Great Republic upon still cheaper conditions than hitherto. This is a circumstance which must not be overlooked when we are dealing with the future of American metallurgy. The scantiness of population in many parts of the United States, the absence of adequate supplies of capital, and the want of ready means of communication have all tended to check the development of metallurgical industry among the Americans. But these drawbacks are in course of removal; and as the extensive development of American railways and general mechanical industry must also involve a considerable demand for iron, we see no reason to doubt that the American iron trade will

not only maintain its present position, but that it will also acquire increased importance in the future.

Registration of New Companies.

The following joint-stock companies have been duly registered:

BELGIAN IRON COMPANY (Limited).—Capital 40,000/-, in 20,000 shares. To acquire certain concessions and mineral rights in the kingdom of Belgium, the cheresse for a sum not exceeding 40,000/- The company will carry on business also as manufacturers and smelters. The subscribers are all Belgians, and their names are written rather indistinctly. Amongst the seven the following appear: Bruges, merchant, 1; A. Dewynter, Ostend, merchant, 1; C. Dewynter, merchant, 1; A. Dewynter, Bruges, merchant, 1; and E. Noe, Bruges, merchant, 1. The directors are to hold shares to the nominal value of 1000/- The remuneration to be 600/- and a sum equal to 1 per cent. of the surplus of the net profits of the company in such year beyond the sum necessary to pay to the shareholders a dividend of 10 per cent. upon the paid-up capital at the end of such year.

HOLMHIRST LAND COMPANY (Limited).—Capital 30,000/-, in 100,000 shares. To acquire the Holmhirst estate, in the parish of Norton, Derby. The subscribers are—J. Bradley, Sheffield, 14; W. Wolfenden, Sheffield, 13; J. Duffield, Dronfield, 13; G. Foyne, Sheffield, 14; W. Cumberlege, Sheffield, 13; J. Walker, Rotherham, 1; A. Taylor, Sheffield, 2.

WESTERN DISTRICT BANK (Limited).—Capital 1,000,000/-, in 10,000 shares. To acquire the Exchange and Discount Bank, Barrow-in-Furness. The subscribers (who take one share each) are—Lord Brougham and Vaux; Wilfred Brougham, Penrith; Reginald Brougham, 21, Berkeley-square; H. R. Spark; S. Raugl, Ulvestone; and R. A. Dorrington, 2, Lawson-street, Barrow.

WALLACE-TUCKER FIRE ANNIHILATING COMPANY (Limited).—Capital 30,000/-, in 5,000 shares. To acquire letters patent granted to J. S. Wallace and E. Tucker for an improved method for protecting warehouses and other buildings, and shops, from fire; also letters patent referring to other inventions in connection with safety from fire. The subscribers are—John Jervis, 19, Suffolk-street, Southwark, Park, 10; J. Clarke, St. George's Villa, Hanstead, Essex, 10; J. Harris, Boriton, 5; A. Pulbrook, Threaddene-street, 10; H. Billingham, East Grinstead, 50; J. Wicks, Great Yarmouth, 10; and J. S. Wallace, Belfast, 10.

CHASE MACHINE COMPANY (Limited).—Capital 25,000/-, in 10,000 shares. To manufacture and sell the machine known as Chase's patent pipe cutting and screw threading machine. The subscribers (who take one share each) are—J. E. Hodgkins, West Derby, Liverpool; C. Churchill, 28, Wilson-street, Finsbury; H. Lewis, 25, Wilson-street, Finsbury; J. Clay, 28, Wilson-street; W. Newman, 35, Somers place, New North-road; W. Nash, 12, Queen-street; W. Mather, 35, Buxton-road, Brixton.

VICTORIA CORN MILLS COMPANY (Limited).—Capital 25,000/-, in 5,000 shares. To purchase the Victoria Corn Mills, at Hollinwood, near Manchester.

MILLBURN'S ENGINEERING COMPANY (Limited).—Capital 25,000/-, in 5,000 shares. To acquire the business of Messrs. Millburn and Co. (Limited), of Pomeroy-street, New Cross-road. The subscribers are—Robert Millburn, Stamford Lodge, Lower Tulse Hill, 1000; J. White, jun., Parkside, Dulwich, 600; W. H. Baxter, the Lawn, Brixton Hill, 100; W. F. Richardson, 93, King's-road, Peckham, 1; F. Ruddle, Leytonstone, 1; Thomas Browning, 39, Commercial-road, Robert Jackson, Pomeroy-street, New Cross.

JOINT STOCK CONTRACT ASSOCIATION (Limited).—Capital 30,000/-, in 5,000 shares. To take over the business of Lincoln's Inn Syndicate (Limited). The first seven subscribers are—J. F. Dickson, Leicester; L. L. C——, East Mancall, Kent; Count de Croay Chelan Senior, 27, Craven street; C. J. Wallaston, 65, Westbourne Park-road; F. J. Williams, 44, Bleachem-crescent; E. Winkham, 18, Victoria Gardens, W.; J. Marten, 11, French-road, Peckham Rye.

SMEDLEY'S HYDROPATHIC COMPANY (Limited).—Capital 50,000/-, in 10,000 shares. To acquire Smedley's Hydropathic Institution, at Matlock Bank, together with Smedley's Gasworks. The subscribers are—J. T. M. Smedley, River Castle, Matlock, 1000; R. Wildgoose, Lea Mills, Matlock, 200; W. H. Hunter, Matlock, 200; G. Maraden, Matlock, 200; J. King, Foxley Lodge, Lynn, 300; A. Pringle, Liverpool, 300; and R. Appleton, Huddersfield, 300.

HEYWOOD LAND, BUILDING, AND INVESTMENT ASSOCIATION (Limited).—Capital 50,000/-, in 10,000 shares. To acquire land for building purposes at Heywood, Lancashire. The subscribers (who reside at Heywood, or in the immediate neighbourhood, and take 10 shares each) are—Wm. Chew, J. Clegg, T. S. Rayner, J. E. Mills, H. B. Taylor, H. D. Mills, and William Stott.

ISAAC HOLLIS AND SONS (Limited).—Capital 50,000/-, in 50,000 shares. To acquire the business of Messrs. Isaac Hollis and Son, of Birmingham, dealers in firearms. The subscribers are—H. Hollis, Wm. Hollis, Wm. Hollis, Wm. Hollis, Church-street, Harborne, 174; J. O. Mayne-Turo, 174; G. Ashton, jun., Fransgate, Edgbaston, 1; M. Hipkin, Gothic Cottage, Water Orton, Warwick, 1; J. Hollis, 1, The Nook, Great Malvern, 75; G. Oxley, 22, High-street, Stamford, 1; ABERDARE MERTHYR PATENT FUEL COMPANY (Limited).—Capital 50,000/-, in 10,000 shares. To manufacture and sell patent fuel. The subscribers (who take one share each) are—W. R. Smith, Glanratar, Glamorganshire; G. B. Meagre, Mumbles; H. W. Crawfurd, Swansea; G. Shadick, Swansea; J. E. Burgess, Northumberland Villas, Swansea; J. H. Burgess, Swansea; and J. D. Jones, 5, Gloucester place.

FYLDE MANUFACTURING COMPANY (Limited).—Capital 30,000/-, in 5,000 shares. To carry on a manufacturing business at Kirkham, Lancashire, where the subscribers reside.

PARK VIEW DOUBLING COMPANY (Limited).—Capital 25,000/- To acquire land at Reddish, Lancashire, for the purpose of erecting cotton factories, &c.

ECHOES FROM THE MINING MARKET.

Scarcely so much business has been done during the past week, Tin has been weaker, and mine managers are complaining that they are receiving for their ores even less than the official standard price. It is reported that English tin is very firmly held, and the London market has changed but little, but symptoms of weakness are apparent in more than one quarter, and a drop is expected. The other metal markets are without appreciable change. In shares, West Chiverton have again engrossed the chief attention, many having been dealt in daily. At the close they are decidedly firmer, and it is said they are scarce for delivery. The lode has now been officially valued as worth 7 cts. per fathom; the men are through it, and have found it to be 2½ ft. in width. Driving is being proceeded with through a horse of kilns to cut the north branch of the lode. A good deal of business has been done in South Carn Brea shares, but they close at a decline. A demand appears to be springing up for Parrys Mountain, owing to the improved

JULY 10. 1875.]

THE MINING JOURNAL.

745.

USE OF THE MOUTH BLOW-PIPE.

Although the introductions to the use of the blow-pipe are now very numerous, few, if any, surpass in utility and compactness that of Dr. Theodore Scheerer, the translation of which, by Mr. H. F. Blandford, F.G.S., has long been extensively used by English students. The third edition* has now been issued, and, as it has been carefully revised to adapt it to present views, it will be found as useful as ever. The historical sketch of the progress made in the application of the blow-pipe to the chemical investigation of ores and minerals is particularly interesting. It appears that Antony Swab, a Swedish Councillor of Mines, who lived about the commencement of the last century, was the first who experimented in this direction. After him the Swedish mineralogist Cronstedt used the blow-pipe to aid in distinguishing various minerals, especially with reference to the mineralogical system founded by him in 1758, and Engeström, who in 1770 published an English translation of Cronstedt's "System of Mineralogy," introduced into his work a description of that mineralogist's mode of using the blow-pipe. In 1773 Engeström's description was translated into Swedish, and shortly afterwards into many other European languages. However imperfect the use of the blow-pipe was at that period understood it soon, by its certainly and readily-obtained results, excited much attention; but for some time, owing to the large amount of practice required for its successful application, but little progress was made in its manipulation. Its use was much extended by Bergmann, who employed the blow-pipe for qualitative investigation in all branches of inorganic chemistry, and who showed how by the aid of this instrument it is possible to recognise very small traces of mineral substances which could only be discovered with great difficulty by any other process. Bergmann published the results of his experiments in a work in the Latin language, printed in Vienna in 1779, and translated into Swedish by Hjelm in 1781.

After Bergmann's death, which occurred shortly after the publication of his work, Gahn made further progress in the path of investigation struck out by Bergmann. By long-continued practice and much perseverance, he attained great skill in the use of the blow-pipe; but he, unfortunately, never published any of the rich results of his experience, and those would have been entirely lost had it not been for the ready liberality with which he communicated his art to all who desired to acquaint themselves with it. It was thus that the young Berzelius, whom Gahn especially distinguished as a disciple of his art, was enabled to avail himself of the experience of the latter, and upon this foundation to build up a lofty structure. In the selection of Berzelius as his pupil, Gahn evinced the greatest judgment, for it would have been difficult to find anyone more fitted to be his successor. Not only did Berzelius extend and improve the application of the blow-pipe to a high degree, but, at the same time, by his personal instructions and by his writings, he spread abroad the knowledge of the instrument, so that at the present day the use of the blow-pipe forms an essential part of the knowledge of every chemist. In 1821 Berzelius published his excellent work, entitled "The Use of the Blow-pipe in Chemistry and Mineralogy," a work which has since passed through many editions, and has been translated into most European languages.

Up to this period the attention of blow-pipe investigators had been turned solely to the application of the instrument in qualitative research. It was Edward Harkort (not Harkort, as Mr. Blandford writes it more than once) who first endeavoured the idea of employing the blow-pipe to ascertain the quantities as well as the nature of mineral ingredients, and who thereby founded the important art of assaying by the blow-pipe. In 1857 he published, at Friedberg, the first part of his "Prodruck mit dem Löthrohr," containing the results of his experiments on the assaying of silver with that instrument, and this was the only writing which ever appeared from his hand, for shortly after its publication he left Europe for Mexico (where he soon afterwards died), and was thus unable to publish the second

part, in which he intended to describe the methods he employed for assaying lead, copper, and tin. Plattner, recognising the importance of continuing and extending the researches of Harkort, applied himself for many years to this object, and by his perseverance and skill he succeeded in bringing the art of assaying with the blow-pipe to a degree of perfection which would formerly have been deemed unattainable, and obtained results which in some cases surpass both in accuracy and rapidity those obtainable by the delicate processes of chemical analysis. Plattner published the results of his experiments on both qualitative and quantitative analysis in his excellent work "Die Prodruck mit dem Löthrohr," which has gone through ten large editions, the last considerably enlarged and extended by Prof. Richter, and translated into English by Prof. H. B. Cornwall, of Princeton College, U.S. (London: Sampson Low and Co.), being the most complete work on the subject extant. Under Berzelius and Plattner the use of the blow-pipe in qualitative and quantitative analysis has become so comprehensive in its details that considerable time and practice are requisite before the student can render himself master of the art; and this is especially the case with regard to quantitative assaying, which is, in consequence, seldom practised by chemists, but only by some few professional assayers in Germany. As an aid to the chemist the blow-pipe is invaluable, as a substitute for the other processes employed in the laboratory it will give satisfactory results in the hands of but very few.

As it is now twenty years since Mr. Blandford made his translation of Prof. Scheerer's little book, and as the translation has been constantly in the hands of students ever since, its general arrangement is well known; but it may be stated that the value of the new edition is much enhanced by the thorough revision which it has undergone, and by the modernising of the chemical formulæ in the second part the old system of indicating the oxygen and sulphur having been abandoned, and the new chemical notation substituted for it. As the new edition corresponds page for page with the old one no inconvenience will result from both editions being used in one class—a circumstance of considerable importance where part of the students are already supplied. The book gives a brief but comprehensive description of the most important processes of qualitative research with the blow-pipe, and it cannot be doubted that the author's hope that by the aid of the work students in mineralogy and metallurgy may be enabled to regard the blow-pipe as a useful, faithful friend will be completely realised.

PHYSICAL DETERMINATION OF MINERALS.

The difficulty of determining minerals by the aid of theory alone without the advantage of practical experience has been complained of by, perhaps, the majority of students entering a mining school for the first time, but not a few who have attentively listened to the elaborate chemicoo-mineralogical discourses of celebrated teachers for the short period of three academical years have been so deeply impressed with the metaphysical perfection of the hypotheses they have been taught to rely upon that their cerebral qualitativeness has become entirely changed, and the very system which at first alarmed them has not only been adopted but rendered ten times more elaborate, so that minerals, the chemical composition of which could be but imperfectly expressed in symbols, can now be dealt with most readily, the chemico-mineralogical designation of the mineral showing at once the ingredients contained.

The necessity of describing cupreous bismuth, for example, as a double sulphide of copper and bismuth must have caused much annoyance to many, but when it is designated a double orthomontanobismuthite the perplexity leaves little to be desired, yet even here the advantage would not be so readily appreciated as by reference to such a mineral as Saurisite into the composition of which there enters a bisupsgintivalo-monoquivalo-sexdecimadibromo-bis-ortho-decadimadic-radical, since in this case it is simply necessary to remember the name in order to be able to determine with but few other data, and comparatively little calculation, the exact percentage of each element which the mineral contains, though it should be mentioned that in the case of Saurisite it is only assumed, not ascertained, that the total power of the aluminium atoms to satisfy acid radicals is diminished by so many bonds as are represented by the number of atoms of the other cation element, these bonds uniting the latter as to an acid, and leaving the remainder to be in turn saturated by the acid silicon radical.

This is an extension of the method of determination taught by Albin Weisbach at the Freiberg School of Mines. He found that the students, in examining the specimens given to them, often lost much time in looking out and reading the descriptions in the various compendiums of minerals, and this originated in the desire to assist the student in the diagnosing of metals, especially as Dufrenoy's attempt to help the determination of minerals by their physical characteristics could scarcely be considered a success. The efficacy of the system pursued at Freiberg for instructing young students in the art of distinguishing mineral species off-hand by the aid of a tolerable memory and an intelligent observation of a few of their most striking physical properties is acknowledged, but it has been remarked that the system is not applicable to all minerals. The Professor divided minerals into three tabular systems, of which the first embraces those of metallic lustre; the second, those of non-metallic lustre, which give a coloured powder; whilst the third contains all minerals of non-metallic lustre and colourless streak. Chemical investigation and the blowpipe are only resorted to in very exceptional cases. The great advantage of Weisbach's arrangement is that it may be studied without any very extensive knowledge of chemistry, and in the translation just completed by Mr. Persifor Frazer, jun., assistant-geologist of the second Geological Survey of Pennsylvania, the additional columns given need not be used by the young student unless he be sufficiently acquainted with chemistry to be able to profit by them.

The alteration which Mr. Frazer has made detracts nothing from the value of the book, and as he has made them to meet the views of those whom he has consulted they will, doubtless, be appreciated. He states that the column of chemical names was introduced to supply what he knows many of the sincerest admirers of Prof. Weisbach's general system have felt to be a want in his tables—a knowledge of the chemical constitution of the mineral. Not only does the beginner feel his information as to a mineral incomplete without this essential characteristic, but the very chemical nature of a mineral will sometimes decide whether under the circumstances of its occurrence it can be what it was supposed to be. It is, perhaps, to be regretted that Mr. Frazer has adopted a system of symbols infinitely more bewildering than even Frankland's—in fact, a kind of complicated confusion thereof, but the exact nature of the system cannot be explained owing to its necessitating the use of special type, which very few printing offices contain. But th-

* "An Introduction to the Use of the Mouth Blow-pipe." By Dr. THEODORE SHEREER; to which is added a Description of the Blow-pipe Characters of the more Important Minerals. By Henry F. Blandford, F.G.S. Third edition, revised. London: Frederic Norgate, Bedford-street.

† "Tables for the Determination of Minerals by those Physical Properties ascertainable by the aid of such simple instruments as every student in the field should have with him." Translated from the German of Weisbach. Enlarged, and furnished with a set of mineral formulæ, a column of specific gravities, and one of the characteristic blowpipe reactions. By PERSIFOR FRAZER, jun., A.M. Philadelphia: J. B. Lippincott and Co. London: Trübner and Co., Ludgate Hill.

inability of the *Mining Journal* to be prepared for his "little eccentricities" is not surprising, since in his own introduction he is compelled to state that "the printer has found it necessary to introduce a dash for the plain Roman 1, which makes all the diatomic hexad molecules look somewhat as if they were ashamed of themselves, and trying to withdraw; but he hopes this aesthetic fault will be passed over in view of the other and more important matters involved;" whilst further on he takes the precaution "to remind those who still persist in deeming his rational formulæ irrational that their atomic proportion still remains the same as before, and that such readers may extract all the information from them which they could from the old formulæ, by disregarding both signs and hypotheses very much, he must add, as a man might use a chisel for a screw-driver."

The work is beautifully printed, and gives evidence of the utmost possible care having been bestowed upon its production; indeed, its preparation must have involved an enormous amount of labour, and although the column of chemical formulæ may not be very generally understood, the mineralogist can well dispense with it, and will find but few works of greater utility to him in the field. It is a really useful little volume.

SCIENCE OF STEAM.

That scientific knowledge is of advantage to practical men is admitted by all whose opinion is worth having, and to the engineer probably nothing can be of greater importance than an acquaintance with the science of steam. It has not unfrequently been urged, especially by working engineers and boiler-makers, that the so-called men of science cannot appreciate the wants of men of business, and it is this feeling that has secured favour for the handsome treatises from time to time issued by Mr. N. P. Burgh, whose illustrative plates are always so admirably drawn and engraved as to be readily intelligible to the practical man almost without the aid of supplementary explanation. As all the best workmen have theories of their own, it matters but little to them what particular views a writer may entertain, provided he gives them good drawings and reliable figures. Both of these they are always sure of in Mr. Burgh's books; and, although his scientific opinions may not be quite orthodox, they have the great advantage of being such as can easily be moulded to those of his readers who prefer to depend upon their own good judgment rather than accept unquestioned the assertions of any philosopher whatever. Mr. Burgh very truly states that the engineers of the future will have to think more than those of the past, because as knowledge becomes more general more science will be needed to instruct others; and the leading object of his new treatise, the first number of which has just been published, is to facilitate the attainment of that knowledge which will enable a manufacturer to do his work judiciously and well. There is an excellent description of Crookes' radiometer, and the discussion of heat and the conduction of heat is commenced, many valuable tables being given—the melting points of materials, the coefficient of thermal resistance, the conductance of materials, Ure's experiments on boiling, boiling temperatures of solutions of different salts, &c.—even in the first eight pages. The diagrams explain a geometrical method of showing the variation of the force exerted round the path of the crank when any number of cylinders and any rate of expansion are used, and show the sectional plan and elevation of direct-acting compound engines, 270-horse power nominal, designed for colliery use by Messrs. R. Napier and Sons, of Glasgow. The book, when completed, will form a good companion to Mr. Burgh's other works, and will, no doubt, be as extensively read.

"Practical Treatise on the Science of Steam in Relation to the Economy of Fuel in Modern Engines and Boilers." By N. P. BURGH, M.I.M.E., A.I.C.E. London: The Author.

NOTES ON HAYTOR IRON MINE.—Mr. Clement Le Neve Foster, B.A., D.Sc., F.G.S., read a paper on this subject at the London Geological Society. He said the Haytor Mine is situated on the eastern borders of Dartmoor, about $\frac{1}{2}$ mile from the pile of granite rocks from which its name is derived. The iron ore occurs in the form of magnetite interstratified with altered shales and sandstones of carboniferous age, which strike about E. 25° S., and dip northwards at an angle of about 30° . Near the iron ore the rock becomes highly charged with hornblende, and is sometimes apparently entirely made up of actinolite. Garnets occur in great abundance. The following section is shown in the adit level:—Carboniferous rock; iron ore with partings of rock, 10 ft.; carboniferous (about), 6 ft.; iron ore with partings of rock, 14 ft.; carboniferous (about), 3 ft.; granite vein, 8 in.; iron ore, 6 ft. A fourth bed, about 3 ft. thick, is seen cropping out about 30 yards N.E. from the others. The granite vein is intruded, not interbedded. The outcrop of these beds of magnetite may be traced eastwards a distance of about $\frac{1}{4}$ mile. The author considers the iron ore to be simply an altered stratified deposit, and not an igneous trap.

DEEP GOLD MINES.—In the Prince Patrick Company's ground at Stawell a new gold-bearing quartz reef has been found, at a depth of 1100 ft. from the surface. The reef was found to be nearly 3 ft. through, and it has been reported that it has all the characteristics of a permanent vertical lode, similar to that in the North Cross Reef claim at Stawell, which has already returned more than 600,000£ worth of gold. The stratum in the shaft of the Magdalene Company at Stawell, now down about 1600 ft., is said to continue most promising, and the prospects of the Newington Company, whose shaft is sunk to a depth of over 1500 ft., are also considered good. Much confidence is felt, from the recent reports from Clunes, that the New North Clunes Company will get a continuation of the rich lode struck in the Port Phillip Company's mine at their deep level, and if it does will gain a new lease of life. The Prince of Wales Company, Cobblers, Ballarat, have crushed payable quartz from their 600 ft. level, which is lower than any payable quartz has been found hitherto in the same district, a fact of the greatest importance, as showing that extensive deposits of good quartz may be found at great depths on Ballarat as well as on other gold-fields.—*Melbourne Argus*.

IRONMAKING IN JAPAN.—Messrs. Head, Wrightson, and Co., of the Teesdale Ironworks, Stockton-on-Tees, have entered into a contract with the Japanese Government to supply the whole of the necessary plant for two blast furnaces which are to be erected at the Hiyogori Mine, in the North of Japan, where it is said that a rich ore containing 50 per cent. of metallic iron exists. These will be the first blast-furnaces constructed in this part of the country. The professional adviser of the Government is Mr. David Forbes, F.R.S., of London, a secretary of the Iron and Steel Institute. The furnaces will be 57 ft. high, 10 ft. in the bosh, for charcoal, and will be fitted with Whitwell's patent hot-blast stoves, Wrightson's patent charging apparatus, and all the modern appliances in this department of engineering.

APPARATUS FOR GETTING RID OF DUST IN WASHING SLACK.—Mr. BARBIER-PERRONET, of Saint Etienne, has recently patented an appliance for rendering easier and more economical the washing of slack, by previously effecting the separation of the fine particles, or dust, from the granular particles, which are thus alone submitted to the operation of washing. This separation is effected by means of a current of air supplied by a blower. The apparatus consists of a drum with internal blades, which may be flat or curved, made to revolve by the same motive-power that drives the blower. The slack falls down through a passage at one of the ends of the drum. The wind draws up with it the fine particles into a chamber, open at the other end, at a little distance from the drum, and the granular particles fall in the space between the two on account of a slight inclination given to the axis of the drum. The coal, thus freed from the lighter particles, is conducted to the washing apparatus direct. The advantages which result from the use of this appliance are the following:—first, diminution in the labour of washing, on account of the smaller quantity of coal to be washed; two, further diminution in this labour, on account of the washing being performed better and more expeditiously; three, increase in the quantity of washed coal, as the dust may be mixed with the washed coal direct without itself undergoing the process of washing, which considerably reduces the quantity.—*La Houille*.

CORNWALL MINERALS RAILWAY.—There is just now a large demand for railway carriages, but those required for passenger traffic on the Cornwall Minerals Railway will soon be completed. The full length of the line from Fowey to Newquay is about 25 miles, and it is intended that the distance shall be covered in a little over an hour. The station, after leaving Fowey, will be at Par, Bridges for Luxulyan, Bugle, Victoria (the Victoria Inn), and Helston, which will accommodate St. Columba. It is expected that a large amount of traffic will be developed by this mid-Cornwall line.

PERRAN IRON MINES.—It is stated that the negotiations for transferring the Perran iron mines to a company with sufficient capital to work them on a vigorous scale are all but completed. The mines have been carefully inspected, the ores once more analysed, and everything found satisfactory; and if all goes on well, by the end of this year or the beginning of next it is pretty certain that a whole row of blast furnaces will be in operation at Par. It is probable that some important improvements in the manufacture of iron will be put in practical operation on a large scale for the first time in Cornwall.

CORNISH MINE SHARE MARKET.—The share market was more animated in the early part of the week; more disposition to speculate was shown, and a large business was done in two or three mines. South Carn Brea received the greatest amount of attention, and after advancing to 40s., 45s., have since decreased to 37s., 40s., 40s. In the latter part of the week the market has been quiet again, with not quite so much doing. The metal markets have continued quiet throughout the week, and prices of tin and copper have but little changed. The smelters are paying 2s. less for tin, although there has been no "official reduction" of the standards.

The following are the closing prices.—Carn Brea shares have declined somewhat, and are now quoted 39 to 41, against 40 to 42 last week; these shares have not been much dealt in of late. Cook's Kitchen, dull, at 5½ to 6. East Lovell, 8 to 8½. Providence, quoted 3 to 3½, but there is really nothing doing in them at present. Tincoff shares, rather lower, 19½ to 20½. West Basset shares remain firm at 4½ to 5. West Frances, 6½ to 7½. West Tolgus shares are quiet at 44 to 46. Wheal Kitty (St. Agnes), called 3 to 3½. West Chiverton shares are tossed to and fro to suit the views of certain interested parties; they are thrown as high as 25s., they are now 12s. to 13s. One or two knowing ones have, it is said, already cleared very large sums of money by extensive market operations. East Pool, 14 to 14½. The meeting is to be held next Monday, when a dividend of 2s. 6d. per share is expected. They have recently sold 50 tons of arsenic to Mr. Dennis, his being the highest tender, at 8s. 9d. nearly double the last price realised. We hear that they are adding 16 heads to their stamping powers, which will doubtless increase their return.

Marke Valley shares, consequent on two most important improvements in the mine, within the last ten days had a considerable advance, the quotations being 30s. to 40s., with very few shares in the market, buyers greatly predominating. Many shareholders conversant with the mine are sanguine that within another month the price of shares will be nearly doubled, as they believe that the profits the company is at present making will, judging from the improving appear-

ance of the lodes, be considerably augmented, and to such an extent as to place it on the Dividend List.—*West Briton*.

MINING NOTABILIA

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

BEDFORD UNITED.—As a small shareholder living in the neighbourhood of this mine I think it my duty to advise those at a distance who may not be so fully aware of the valuable and important improvements as I am, not to be in too much haste to dispose of their shares for a song to serve the purposes of the broking gentry; for, although the shareholders may not know it, it is, nevertheless, a fact that the mine is opening out first-rate, and there is every probability of its becoming very shortly a dividend mine. It sounds very cheering to hear of a good profit being made on the three months' working up to the next meeting, to be held some time this month. This will certainly pay a dividend at the end of the three months following.

MONYDD GORDDU.—Great energy is displayed to bring this mine into working order, and a few weeks will enable them to set the machinery going, and send to market the large quantities of lead accumulated at surface, and ready to come away over the adit. The engine-shaft is 12 fms. below adit, and a few weeks cross-cutting will reach the lode 130 ft. under those great bodies of lead opened overhead. There is every prospect of a splendid property here.

NEW ZEALAND KAPANGA.—In our summarised report of the proceedings at the meeting of shareholders yesterday week, we inadvertently omitted to mention that, in the course of the proceedings, a compliment was paid to the excellent management of Capt. Thomas. Mr. George Oyle said:—"The Directors had always had the greatest faith in Capt. Thomas, but when a man was at a distance of 16,000 miles, and the shareholders did not find the returns they expected. It was natural for them to ask for some information with regard to the management of the works and the conduct of the agent in charge. In this case it appeared that every possible economy had been used in the conduct of the mine, and the construction of the machinery had been perfect."

A petition to wind-up the Rangeworth Coal and Iron Company (Limited) has been presented to the Court of Chancery.

Creditors of Monte Loretto Gold and Copper Mining Company (Limited) are to send in their claims to the official liquidator, Mr. J. Waddell, Mansion House Chambers, E.C., on or before October 9.

THE COAL TRADE.

Mr. J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports and exports of coal into and from the port and district of London, by sea, railway, and canal, during June, 1875:

	IMPORTS.	By Railways and Canal.
	Ships. Tons.	Tons.
Newcastle	134 ... 91,679	London and North-Western ... 66,703
Batham	29 ... 12,165	Great Northern ... 62,164
Sunderland	85 ... 57,354	Great Western ... 33,912</

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—*S. Toy, July 7:* The intermediate level at present is not producing sufficient lead to value. We are now putting in timber to make the rise, stope, and level secure, which will be finished this week. We are blasting down the lead-bearing part of the lode in No. 1 adit level, which has improved in the past week, and is now worth 20*s*. per fathom. All other works are going on well.

BAMFFYLDE.—*J. Juleff, H. T. Haley July 7:* The 102, west of No. 4 shaft is worth 1*t* ton of copper ore per fathom. The 90 west of No. 4 is producing stones of copper ore; the rise above the 90 is worth ½*t* ton of copper ore per fathom, this rise from present appearances will open out good stoning ground. The various stope continue to do the same as last reported, and on an average will produce 1*t* ton of copper ore per fathom.

BEDFORD CONSOLS.—*George Rowe, J. Mitchell, July 6:* In the 67, east of cross course, we have completed cutting through the lode, and find it to be over 8 ft. wide, the north part of which for 2*f*. wide is principally capel and spar, containing mundic and occasional stones of copper ore. In the back of the shallow adit level, east of the air-shaft, the men are busily engaged putting in stulle. The lode at this point is still worth 10*s*. per fathom. The lode in the stope at the 15, east of the air-shaft, is worth 10*s*. per fathom.

BOG.—*W. T. Harris, J. Barkell, July 8:* The 175, driving east on south lode, is producing 1½*t* ton of lead ore per fathom. The end driving west, on main lode, is worth ½*t* ton of lead per fathom. The 163, driving west on main lode, is worth 30*s*. per fathom, principally lead. This level has been driven through a continuous course of ore for about 20 fms. in length, and the bottom end is yet several fathoms behind it. The rise in the back of this level, which is being worked on tribute, at 4*t*. per ton, is yielding 3 tons of lead per fathom. The end driving east, on the north lode, at this level is at present poor, except in the roof of the level, where there is a branch of ore that will be worked at a moderate tribute. There is no change of importance in the 60 or the 50 since last report.

BURROW AND BUTSON.—*John Christophers, June 29:* The stope in the back of the 20, west of Tonkin's shaft, is worth 3½ tons of blende per fathom, with some lead in it; lode 8*f*. wide. The stope in the back of the 30, also west of Tonkin's shaft, continues to produce 4 tons of blende per fathom, and good stones of lead; lode 10*f*. wide. The stope in the back of the same level, east of Tonkin's shaft, also produces 4 tons of blende per fm., and good stones of lead in it; lode 5*f*. wide.

JULY 3: Setting List: A stope in the back of the 30, east of Tonkin's shaft, and 20 fms. east of the cross-cut, I set to four men, at 8*s*. 10*s*. per ton of lead and 1*t*. per ton of blende. Another stope, 30 fms. east of said cross-cut, I set to three men at the reduced tribute of 7*s*. per ton for lead and 1*t*. per ton of blende. In the back of the 20, 3 fms. east of Tonkin's shaft, I set a stope to two men, at 8*s*. 10*s*. per ton of lead and 1*t*. per ton of blende. And 10 fms. further east I set one pitch to four men, and another to three men, at 8*s*. 10*s*. per ton of lead and 1*t*. per ton of blende.—*West of Tonkin's Shaft:* I set a stope in the back of the 30 a pitch at 8*s*. 10*s*. for lead and 1*t*. per ton for blende, with 1*t*. per fathom for cross-cutting to the north or lead lode, which cannot be far off now. In the back of the 20, 15 fms. west of the shaft, I set two pitches to five men, on the old tribute of 8*s*. 10*s*. per ton of lead and 1*t*. per ton of blende. I shall be able to set some other pitches when the stuff on hand is cleared off.

CALDBECK FELLS.—*J. Polglase, July 2:* I am pleased to inform you that the water is in fork, and stoning is commenced in the back of the 20; the end will soon be resumed. No. 1 stope, in back of the 20, is worth 20*s*. per fathom. No. 2 stope is worth 10*s*. per fathom. The 90 end west is producing good stones of lead, and is a beautiful lode, which I fully expect will shortly be productive. The stope in back of the 80 are looking well. We purpose sampling, on Friday next, about 60 tons of lead, and soon after about 20 tons of copper ore, which should realise, according to the usual prices, about 800*s*.

CATHEDRAL.—*J. Michel, July 8:* The lode in the engine shaft, sinking below the 30, is full 3*f*. wide, and ore throughout. Judging from the character of the lode and the ground about it, I most confidently rely on our soon having a very rich course of copper at this most important point of present operations. The lode in the 30 east is between 2 and 3*f*. wide, composed of the finest gossan possible, green carbonate, black and grey copper ore, altogether a very splendid-looking lode, and, beyond a doubt, on the top of a great course of copper. In the 30 west the lode is between 2 and 3*f*. wide, worth 20*s*. per fathom. The mine is opening out in a highly satisfactory manner, and will soon be doubling its present return and realising excellent profits.

CLOGAU (Gold).—*July 7:* The alterations and repairs of the turbine were completed, and the four small britann-pans resumed work on the 20th ult. On Saturday, the 3rd inst., the directors received a bar of gold weighing 38 oz. 2 dwts., the result of the clean-up on that same day. The erection of the heavy machinery is proceeding satisfactorily, and it is now expected shortly to be able to make a start on a scale commensurate with the importance of the mine.

CRENNY AND WHEAL ABRAHAM UNITED.—*W. Thomas, Jas. Hammill, July 7:* Sturt's Engine-Shaft: In the 228, driving west, the lode is 2½*f*. wide, yielding 1½ tons of copper ore per fathom.—St. George's Shaft: In the 215, driving west, the lode is 3*f*. wide, producing 2 tons of copper ore per fathom. In the 215, driving east, the lode is 1*f*. wide, yielding copper ore to dress. In the 203, driving east on the south lode and west of shaft, the lode is 1*f*. wide, yielding copper ore to dress. The 203, the lode is 2*f*. wide, producing 1 ton of copper ore per fathom. In the winze sinking below the 203 the lode is 2*f*. wide, yielding 1½ tons of copper ore per fathom.—Woolf's Shaft: In the 220 fathom level, driving east, the lode is 4½*f*. wide, producing 3 tons of good copper ore per fathom.—Blewitt's Shaft: In the 234, driving west, the lode is 4*f*. wide, yielding occasional stones of copper ore.—Richards's Shaft: In the 220, driving west, the lode is 7*f*. wide, producing 6 tons of copper ore per fathom, and letting out much water, which we consider a good indication. In the 210, driving west, the lode is 3½*f*. wide, yielding copper ore to dress.

CWM DWYFOR.—*J. Jewell, July 8:* Since my last report a great improvement has taken place in the lode in No. 1 level driving east of the south cross cut on No. 4 adit. This lode is now 2½*f*. wide, yielding 1 ton of lead ore per fm., and promising for further improvement. I am pushing on this level with all possible speed by six men in order to communicate with the water shaft sunk from surface on this lode, where we have good stoning ground. In the level driving east of the south cross cut on No. 3 lode the lode is 2*f*. wide, yielding good stones of silver-lead and copper ores—a very kindly lode. Four men are driving this level.—North Lode: The part of the lode in the No. 1 level driving east of the north cross-cut on the No. 4 adit is 3*f*. wide, producing copper ore, iron pyrites, &c.; this level is being driven by 1*t* men. I have connected the flat-rods of the north shaft with the pumping wheel, and have now got the shaft clear of water. I hope to be completed to night, when I shall commence sinking it to communicate with the level below for stoning and ventilation.—Incline: We have completed about 248 yards of the incline from the terminus of the Gorsedd Junction and Portmadoc Railway up to the ore floors.

DENBIGHSHIRE CONSOLIDATED.—*John Pryor, July 8:* The ground is still hard in the 112 east, and no signs of the footwall of the lode, but we cannot be far from it now. The 112 west new lode maintains its width, and it is bearing more south. The nature of the lode is very satisfactory, but until the ground becomes softer I do not expect it to bear ore in large quantities, but the composition of it satisfies me that when we are further advanced from the cross lode we shall find it valuable. In the north cross-cut, out of the same level, the ground is still hard, and the water flowing out as last reported. This does not at all interfere with our operations, as the pumping-engine is working only 3 hours out of the 24. In the 68 west the men are driving in very promising ground, and to-day they have met with some little ore.

DEVON GREAT CONSOLS.—*J. Richards, July 8:* Wheal Josiah: Richards's engine-shaft is in regular course of sinking below the 260; the lode is 2*f*. wide, composed of capel, quartz, and mundic, and fair progress is being made.—Wheal Eminia: Railway Shaft, New South Lode: In the 160 east the part of the lode carried is 4*f*. wide, consisting of strong capel, with lumps of arsenical mundic, quartz, and a little ore of good quality.—New Shaft, New South Lode: Driving in the 160, east and west, has been commenced; the lode in each direction is 3*f*. wide, composed of healthy-looking capel, mundic, and good stones of ore—very promising. In the 145 east we continue to carry 5*f*. of the lode, which is worth 8 tons of ore, or 24*s*. per fathom. The lode in Diamond's winze, sinking below the 145 east, continues a very fine course, worth for the length and width carried (9 ft. by 6 ft.) 20 tons, or 120*s*. per fathom. In the 130 east the lode, or part thereof carried, is 4*f*. wide, composed of capel, mundic, quartz, and ore, worth 7 tons, or 28*s*. per fathom. In Castle's winze, below the 130 east, there is a good course of ore, worth 12 tons, or 50*s*. per fathom.

DUBBY SYKE.—*W. Tallentire, July 5:* Dubby Syke Level: We are driving the cross-cut north from this level; set to two men, at 4*f*. 12*s*. per fathom. When we got the shaft entirely cleared out, about 16 ft. from the bottom, we found that the "old men" had driven about 5 fathoms east in the same string as we have cut in the bottom; it is 6*f*. wide, of barytes, mixed with bits of lead ore. Shooting Box level is clearing out fast; we have laid rails from the level mouth to where cleared, about 37 fathoms, and it is standing good other 80 fathoms more; there some stones having fallen in and damaged the water, which prevented us getting any further at present. We have made good progress with the buildings, and put the rest of the shop on to-day; both office, storehouse, and shop will soon be done.

DYLIFFE.—*Edward Rogers, July 7:* Dyliffe Lode: In the end driving east of the 120 the lode is worth 18*s*. or 20*s*. per fathom. At the 60, driving west of the winze, the lode is 1*f*. wide, and composed of lead, copper, and blende. At the 25, east of old engine-shaft, there is a little improvement, the lode being worth 2*s*. per fathom. At the 15 east the lode is producing some good stones of lead ore. In the winze in bottom of this level the lode is worth 10*s*. per fathom. There is most likely another part standing to the north, which will be cut into when we reach the level below.—Esgairgarned Lode: The 45 west and the winze in bottom of the 35 are both progressing by the side of the lode for dispute.

EAST DARREN.—*July 5:* In Skinner's shaft, sinking under the 116 fm. level, the ground is chiefly composed of a dark clay-slate and branches of carbonate of lime; favourable for sinking, and fair progress is being made. In the drift west of cross-cut, under the 80, the lode is 5*f*. wide, still disordered by cross-joints, and unproductive for lead. This point is now communicated to the pitch over the 92, on north part of lode. In the winze sinking under the 68 the lode is about 2 feet wide, soft and unproductive. The tribute pitches throughout the different levels continue to yield fair quantities of lead ore. We have completed repairing the top of Skinner's shaft, and men are now engaged in putting in timber in the different levels throughout the mine. Our machinery is in good working order; drawing and dressing progressing regularly. We shall sample to-morrow 50 tons of silver-lead ore, for sale on the 19th inst.

EAST WHEAL BASSETT.—*R. Pryor and Son, July 6:* The lode in the stope in back of the 50, west of Flax-road shaft, continues to look just the same as when last reported on, being worth for copper ore 20*s*. per fathom. This stope holding up in whole ground, together with the fact of our having a good lode of ore standing on both sides of same, lead us to regard this point as being one of considerable promise. We hauled to surface yesterday an exceedingly rich pile of black oxide of copper from this stope. There is no change throughout the mine since our last report.

EAST WHEAL GRENVILLE.—*E. Hosking, W. Bennetts, July 3:* The mine is looking much the same as last reported.

EAST WHEAL GRENVILLE.—*W. Bennetts, July 8:* The lode in the 130 east is 2*f*. wide, worth 6*s*. per fm. The lode in the winze below the 120, west of engine-shaft, is worth 8*s*. per fm.; we expect to communicate the rise with the winze next week. The 130 cross-cut north is in favourable ground. The lode in the 120 east will produce 1 ton of copper ore per fathom. The stope below the 95 east is worth 7*s*. per fm. In the 25 cross-cut we have cut through the lode; it is 2*f*. wide, composed of mundic, copper, quartz, peach, and producing saving work for tin—a very kindly

lode. We are now driving west on its course, and hope as we leave the influence of the cross-course to have an improved lode.

FRANK MILLS.—*James Rowe, jun., N. Addems, July 7:* Setting Report: The engine-shaft to sink below the 145 fm. level, by nine men, at 25*s*. per fathom; lode contains a little lead. Winze to sink in bottom of 145 north of cross-cut on west lode, by two men, at 4*f*. per fathom; lode producing good stones of lead, and looking kindly for an improvement soon. Stope in back of 145 fm. level north of engine-shaft on iron lode, by six men, at 3*f*. per fathom; the lode producing 4 tons of white iron per fathom. The 145 fathom level, to clear and secure north of this stope, by four men, at 1*f*. 10*s*. per fathom. The 115 cross-cut to drive west of engine-shaft, by two men, at 1*f*. 10*s*. per fathom; cross-cut still in the elvan, and we are occasionally meeting with spots of lead in the elvan. Stope in back of 115, north of engine-shaft, by six men, at 3*f*. per fathom; lode producing 8 tons of good white iron per fathom. Stope in side of 115 north, by two men, at 2*f*. 10*s*. per fathom; lode producing 8 tons of white iron per fathom. Stope in back of 72 north of engine-shaft, by six men, at 4*f*. 10*s*. per cubic fathom; lode producing 4 cwt. of lead ore, and 3 tons of good white iron per fathom. The 45 fm. level north of iron lode, by six men, at 3*f*. 10*s*. per fathom; the lode producing 4 tons of white iron per fathom. The 115 fathom level, to clear and secure north of this stope, by four men, at 1*f*. 10*s*. per fathom. The 115 cross-cut to drive west of engine-shaft, by two men, at 1*f*. 10*s*. per fathom; cross-cut still in the elvan, and we are occasionally meeting with spots of lead in the elvan. Stope in back of 115, north of engine-shaft, by six men, at 3*f*. per fathom; lode producing 8 tons of good white iron per fathom. Stope in side of 115 north, by two men, at 2*f*. 10*s*. per fathom; lode producing 8 tons of white iron per fathom. Stope in back of 72 north of engine-shaft, by six men, at 4*f*. 10*s*. per cubic fathom; lode producing 4 cwt. of lead ore, and 3 tons of good white iron per fathom. The 45 fm. level north of iron lode, by six men, at 3*f*. 10*s*. per fathom; the lode producing 4 tons of white iron per fathom. The 115 fathom level, to clear and secure north of this stope, by four men, at 1*f*. 10*s*. per fathom. The 115 cross-cut to drive west of engine-shaft, by two men, at 1*f*. 10*s*. per fathom; cross-cut still in the elvan, and we are occasionally meeting with spots of lead in the elvan. Stope in back of 115, north of engine-shaft, by six men, at 3*f*. per fathom; lode producing 8 tons of good white iron per fathom. Stope in side of 115 north, by two men, at 2*f*. 10*s*. per fathom; lode producing 8 tons of white iron per fathom. Stope in back of 72 north of engine-shaft, by six men, at 4*f*. 10*s*. per cubic fathom; lode producing 4 cwt. of lead ore, and 3 tons of good white iron per fathom. The 45 fm. level north of iron lode, by six men, at 3*f*. 10*s*. per fathom; the lode producing 4 tons of white iron per fathom. The 115 fathom level, to clear and secure north of this stope, by four men, at 1*f*. 10*s*. per fathom. The 115 cross-cut to drive west of engine-shaft, by two men, at 1*f*. 10*s*. per fathom; cross-cut still in the elvan, and we are occasionally meeting with spots of lead in the elvan. Stope in back of 115, north of engine-shaft, by six men, at 3*f*. per fathom; lode producing 8 tons of good white iron per fathom. Stope in side of 115 north, by two men, at 2*f*. 10*s*. per fathom; lode producing 8 tons of white iron per fathom. Stope in back of 72 north of engine-shaft, by six men, at 4*f*. 10*s*. per cubic fathom; lode producing 4 cwt. of lead ore, and 3 tons of good white iron per fathom. The 45 fm. level north of iron lode, by six men, at 3*f*. 10*s*. per fathom; the lode producing 4 tons of white iron per fathom. The 115 fathom level, to clear and secure north of this stope, by four men, at 1*f*. 10*s*. per fathom. The 115 cross-cut to drive west of engine-shaft, by two men, at 1*f*. 10*s*. per fathom; cross-cut still in the elvan, and we are occasionally meeting with spots of lead in the elvan. Stope in back of 115, north of engine-shaft, by six men, at 3*f*. per fathom; lode producing 8 tons of good white iron per fathom. Stope in side of 115 north, by two men, at 2*f*. 10*s*. per fathom; lode producing 8 tons of white iron per fathom. Stope in back of 72 north of engine-shaft, by six men, at 4*f*. 10*s*. per cubic fathom; lode producing 4 cwt. of lead ore, and 3 tons of good white iron per fathom. The 45 fm. level north of iron lode, by six men, at 3*f*. 10*s*. per fathom; the lode producing 4 tons of white iron per fathom. The 115 fathom level, to clear and secure north of this stope, by four men, at 1*f*. 10*s*. per fathom. The 115 cross-cut to drive west of engine-shaft, by two men, at 1*f*. 10*s*. per fathom; cross-cut still in the elvan, and we are occasionally meeting with spots of lead in the elvan. Stope in back of 115, north of engine-shaft, by six men, at 3*f*. per fathom; lode producing 8 tons of good white iron per fathom. Stope in side of 115 north, by two men, at 2*f*. 10*s*. per fathom; lode producing 8 tons of white iron per fathom. Stope in back of 72 north of engine-shaft, by six men, at 4*f*. 10*s*. per cubic fathom; lode producing 4 cwt. of lead ore, and 3 tons of good white iron per fathom. The 45 fm. level north of iron lode, by six men, at 3*f*. 10*s*. per fathom; the lode producing 4 tons of white iron per fathom. The 115 fathom level, to clear and secure north of this stope, by four men, at 1*f*. 10*s*. per fathom. The 115 cross-cut to drive west of engine-shaft, by two men, at 1*f*. 10*s*. per fathom; cross-cut still in the elvan, and we are occasionally meeting with spots of lead in the elvan. Stope in back of 115, north of engine-shaft, by six men, at 3*f*. per fathom; lode producing 8 tons of good white iron per fathom. Stope in side of 115 north, by two men, at 2*f*. 10*s*. per fathom; lode producing 8 tons of white iron per fathom. Stope in back of 72 north of engine-shaft, by six men, at 4*f*. 10*s*. per cubic fathom; lode producing 4 cwt. of lead ore, and 3 tons of good white iron per fathom. The 45 fm. level north of iron lode, by six men, at 3*f*. 10*s*. per fathom; the lode producing 4 tons of white iron per fathom. The 115 fathom level, to clear and secure north of this stope, by four men, at 1*f*. 10*s*. per fathom. The 115 cross-cut to drive west of engine-shaft, by two men, at 1*f*. 10*s*. per fathom; cross-cut still in the elvan, and we are occasionally meeting with spots of lead in the elvan. Stope in back of 115, north of engine-shaft, by six men, at 3*f*. per fathom; lode producing 8 tons of good white iron per fathom. Stope in side of 115 north, by two men, at 2*f*. 10*s*. per fathom; lode producing 8 tons of white iron per fathom. Stope in back of 72 north of engine-shaft, by six men, at 4*f*.

worth 10c. per fm. This winze is being sunk with a view of testing the lode in this direction, and if found good the 134 will be resumed; but if the contrary, it will remain suspended at present.

ST. AGNES CONSOLS.—Joseph and Wm. Vivian, July 8: In the 72 fm. level driving west of south cross-cut, the lode is worth 7c. per fathom for tin. Rise in the back of the 72 fm. level, lode worth 8c. per fathom for tin. The stopes in the back of the 72 fm. level worth 9c. per fathom for copper ore. The engine-shaft sinking, with nine men, is 11 fm. below the 72 fm. level.

ST. DAVID'S.—J. Jones, July 7: Edwards's Shaft: The ore in this shaft continues just the same as last week; the shaft is rather hard for sinking, but the men are making very good progress, taking everything into consideration.—Jones's Shaft: We are now 76 yards from the shaft, and have come into very congenial soil in the bottom of the level, and about half the stem that was brought up to surface to-day was very rich ore-stuff, and before we proceed another 5 yards we shall be in the rich iron ground mentioned in my first report, and which I have long expected to see. Owing to the weather being so dry we have not been able to get ore ready for to-morrow's sale.

ST. LAWRENCE AMALGAMATED.—July 8: St. Lawrence: The men are getting a fair quantity of ore, and are daily hoping to reach the spot where they expect a good pocket of it.—Victoria: On the 1st of the month we set four men here to repair and re-open one of the old shafts to a depth of 26 yards. This the men did up to last evening, and this morning they commenced cross-cutting to intersect two or three lodes that are known to exist a few yards off. The first thing this morning the men found several lumps of fine lead, and I should say there is no doubt but they are on the eve of finding a large deposit.

ST. PATRICK.—William Francis, July 7: The 120 yard cross-cut south from engine-shaft is being pushed forward by six men, with full speed; we have seen further traces of lead ore in the rock. The 90 yard cross-cut is being driven with four men, the appearances being very favourable in the cross-course, composed of clay, spar, and gossan.

TANKERVILLE.—Arthur Waters, July 8: The lode at Watson's shaft, 3 fms. below the 152, is opening out very well indeed, and the course of ore now in sight thereto (worth 5 to 6 tons per cubic fathom) looks like the top of another great deposit of lead. Seeing this in the regular line of the shaft, and directly under our first great run of ore, we look upon it as a matter of great importance to the company. The great course of ore driven through in the 152 west, 20 fms., from shaft, is a grand sight to see now. It is laid open by No. 2 winze down in hand by stopes. We have not yet fully taken down the lode here from wall to wall, but additional to the stopes others are engaged shooting down the sides to the full width of the great lode. We have about 9 to 12 ft. more to drive the 152 to the hanging wall bunch of ore; this will be accomplished by the end of the present month, when we shall start a winze below this level to go down in readiness for the 152. The lode to sink in is worth 150c. per fathom at least. Other points in the mine as for some time past.

TEESDALE.—Thomas Watson, June 30: The vein in Holmes's level forehead going north has been very hard and poor during this last week, worth about 2 bings of ore per fathom, but the men have to cut out some more in vein on the west side of the level, showing good lead ore.—Holmes's Level (clearing out): The men are making very good progress with this job; it is all good sound level now up to Holmes's vein.—Road: Some of the surface hands have been engaged in making the 100 yards of new road west of the lodging shop, and will finish in a day or two. Our other surface work is making fair progress. The masons are now working at the new lodging shop.

TRELEIGH WOOD.—E. Hosking, W. Goldsworthy, July 2: Setting Report: To 4 to drive east of the cross-course, by six men, at 6c. per fathom; the lode in the end is now 8 ft. wide, composed of blende, lead, and copper ores, worth for the latter 5c. per fathom. We have driven north about 6 ft., and find the lode to be of the same character; and seeing that the ground going east is favourable for driving, we have set the men to work in that direction, and hope soon to have a further improvement. To stop the back of the 44, east of the cross-course, on the north or copper part of the lode, by three men, at 6c. per fathom; the lode is worth 12c. per fathom for copper ore. It is a better feature than anything we have yet seen, and is opening better than we expected. The tin part of it is still standing to the south. To stop the back of the 44, east and west of Phillips's winze, and west of the engine-shaft, by twelve men, at 8s. per ton; the lode is looking very well, and is worth 18c. per cubic fathom. To stop the back of the 44, west of the cross-cut, from engine-shaft, by six men, at 8s. 6d. per ton; the lode is worth 15c. per cubic fathom. The engine-shaft is sunk 3 fms. below the 44; the ground is still favourable for sinking, and the water easy; and having fixed the timber and made the plat and shaft secure, we expect to make greater progress during this month. The shaft is being sunk by nine men, at 15c. per fathom. To stop the 34 east end and back of ground, by six men, at 5s. 6d. per ton; the lode is worth 18c. per fm.

—July 7: The stopes in back of the 44, east of the course course, on the copper part, is looking very well, and worth 14c. per fathom for copper ore. There is no change to notice in the 44 east end, the men having been engaged most of the week in clearing the stuff. The stopes and 34 east end are looking much the same as reported on Friday last.

TREVARACK.—James Pops, July 7: The engine-shaft is 9 fms. 4 ft. 6 in. below the 74; lode 18 in. wide, composed of peach and capel, with stones of tin. In the 74 west of engine-shaft, the lode is 2 ft. wide, with 9 in. on the north part, saving for tin. In the 74 east the lode is 1 ft. wide, composed of capel and spar, but unproductive.

TYLLOWYD.—J. Paul, July 8: The 20, west of winze, is improving, now 2 ft. wide, containing clay-slate, spar, and lead ore throughout, and likely for further improvement. The stopes are much as last week in appearance. The ground has improved in the engine-shaft, and better progress is being made, branches of spar coming in from north side, some of which contain small branches of lead ore from 14 in. to 1 in. solid. This in all probability is coming from the middle lode, which is a very good indication. I am anxious to see this lode as soon as possible, as well as the south lode in the 30. I expect our round bundle will be ready to start to work in a day or two. Pumping and drawing going on well.

VAUGHAN.—July 5: In the deep adit level east the stope of 20 fms. has been completed, and have again set the men at a stope of 10 fms. to drive at 8c. per fathom, and to clear their own stuff; the lode in the present end is chiefly composed of a light clay-slate and decomposed quartz, unproductive for lead.

VIRON.—S. Harper, July 3: In sinking the engine-shaft below the 100 yard level good progress has been made during the past week. The lode is 18 in. wide, with small lumps or nuggets, with nice lumps of lead, intermixed with sugar-spar—a very promising-looking lode. The shaftmen are removing the 3-ft. and fixing on a 9-ft. pump, lowering down the lift. In the 100 yard level the lode still continues very promising, being about 18 in. wide—spar, with a little lead, but still not to value, and from past and present appearances I am greatly surprised in not having good lode in this end ere this; at the same time, I think it is before us. In the 30 yard level west since Tuesday last I put two and men to open on the footwall side to see if any more lode was standing in that direction. Only meeting with two or three small branches or ribs of spar, I have to-day stopped it, and put the men to resume work in the end. I also put two of same part to rise in the roof of this level, between the hard and the more favourable ground, to prove the lode, and I am pleased to say we have very good lead, about 8 or 10 in. wide, and the ground favourable. I shall continue on the rise for 2 or 3 yards again to see how it proves after having finished with two men at the engine pool, which will be in about a week's time. I should be glad to be allowed to put them to sink in the bottom of the 80 yard level to prove the run of lead gone down; as I named in my former report, this is the right season of the year to do it, and it is the opinion of both the miners and myself if it is done we shall open out a good section of lead ground.

Surface: The masons have not been at the engine pool more than two or three days during the past week, so that we have still about two or three days' work more to do; at the same time, the men have been continually at work rising, carting, and packing up the stonewall with clay, and if the weather is favourable we shall finish it all by this day week. The boards for the ladders to convey the water from the engine-shaft to the new engine pool will be on the mine to-day, when we shall commence making them. All other things going on as usual.

WEST CHIVERTON.—R. Southey, Richard Nancarrow, July 7: During the past week we have cut through the lode in the 150, and extended the cross-cut about 6 ft. further south, in order to see if there is any more lode already standing; but to date we have not intersected anything more than the lode already alluded to, which is about 2½ ft. wide, producing good stones of lead, worth from 8 to 7 cts. of lead per fathom. The 140 end, west of Batter's engine-shaft, is worth about 15c. per fathom; and although the lode at this point is not so rich as we reported on it last we hope the falling off is only temporary. We have also commenced to sink Glubb's shaft below the 130. No time will be lost in reaching the 140. All other points much the same as when reported on last.

WEST GODOLPHIN.—J. Pope, July 6: Wilson's lode, in the 60 east, is worth 10c. per fathom. In the 50 the lode is split—one part worth 8c., the other 6c. per fathom. In the winze sinking below the 50 the lode is worth 50c. per fathom. The 40 fm. level is producing saving work for tin. The winze below the 40 is worth 18c. per fathom. There is no other alteration in any part of the mine since the last report.

WEST MARIA AND FORTESCUE CONSOLS.—William Skewis, July 8: Wilesford's Shaft, West Maria Lode: The shaftmen are engaged in cutting down eastern end of the shaft, in order to bring down the double skip-road from the 93 to the 104. In the 104 east no lode has been taken down for the last month; when last taken down it showed more copper and muntic than it had previously done, and we look for still further improvement as we extend the end eastward. No lode has been taken down in the 93 east since last report for general meeting; it was then worth 15c. per fathom. In the eastern stop, in bottom of this level west, the lode is worth from 10c. to 30c. per fathom. No change to notice in the stopes in back of this leveling last report; the lode was then worth from 12c. to 35c. per fathom. The four men employed in taking out ground for new kiln will complete the work by the end of this week. The tribute pitches are looking just as usual.

WEST MILFORD.—William Francis, July 7: I am glad to say the cross-cut south from West Meadow Shaft is now in loose abeodoo measures, and the progress has, for the past three months been gradually improving. We have now set at 5c. per fm., and hope soon to drive into the main east and west vein (Woodlands), when judging from the present improved and very favourable features, I anticipate speedy returns.

WEST TANKERVILLE.—A. Waters, July 8: The ends, stopes, and winzes particularised in my report a fortnight ago are without change to notice since that date. Everything is going on regularly in the dressing department, and towards another sampling of ore.

WEST WHEAL TOLCUS.—July 8: Taylor's Shaft: The ground is still hard, but better than when we set last. We calculate on the 2 fms. being sunk in the two months as reckoned on. The lode in the 125 east is without alteration, still 3 ft. wide, with spots of ore, but nothing to value. The lode in the 125 west is 4 ft. wide, yielding about the same quantity of ore as last reported—2 tons per fathom. We are pleased to see the lode so large, for over this end in the 115 it is very small. The stop in the back of the 125 is still yielding its usual quantity of ore—10 tons per fathom, worth 100c. per fathom. The lode in the 115 end west is still small, and without ore. The lode in the rise in the back of the 106 is from 3 to 4 ft. wide, hard and poor, very similar to what it is in the 95 over. We hope to put the rise through next week.

The lode in the 95 end west is 4 ft. wide, hard, and without ore. We have put the end men to rise against No. 3 winze, which we expect to communicate in a few days. The stopes in the back of the 95 fm. level, east of No. 3 winze, are as good as ever, yielding from 5 to 6 tons of ore per fathom. The lode in the 85 west is small and without ore. The lode in the 75 west is small, with stones of ore, but not enough to value. We were very hopeful of this, and last week it yielded 24 tons of ore per fathom for a short length. The stopes in the bottom of the 75 appear to be failing. We shall know more of this in a few days.

Richard's Shaft: The ground is much the same, and the men are getting on very well in sinking. The lode in the 65 west is still large (4 ft. wide), with stones of ore, but not so kindly as it was. The lode in the 55 end west is still 2 ft. wide,

and poor. The 40 cross-cut has been driven, as we think, far enough, having passed through a branch; we have decided on driving west on it. We are again busy in preparing for another sampling.

WHEAL ARGUS.—T. Trahair, July 7: The water at the sump is getting less every day. We are getting the stamp in good order and preparing the tinstuff against the fall of the year, when we hope to make up a little of the lost time for the summer months.

WHEAL BASSET AND GRYLLS.—Paul Prisk, July 7: Since the meeting of the adventurers, held June 24, the drawing of tinstuff and materials from Wheal Cook part of the mine has proceeded with all possible speed. At the same time we are pushing on the 12 fm. level east, on new or south lode, with vigour; here we have a still further improvement since the meeting. The lode in the present end is looking well, and about 4 ft. wide, worth from 18c. to 20c. per fathom; driving for 47 fm. per fathom; so it is obvious that we are opening on a good and profitable lode in this part of the mine.

WHEAL CEBROB.—J. Andrews, July 8: The only change in the 120 east is the ground is a little easier for driving. The stopes in bottom of the 120, east and west of winze, are worth 10c. each per fathom. No change in the 108 east. The lode in the 72 cast, is 4 ft. wide, composed of quartz, capel, and muntic; a very promising lode. In the 48 east we are driving by the side of the lode. The stopes in the back of the 72 fm. level, worth 9c. per fathom for copper ore. The engine-shaft sinking, with nine men, is 11 fm. below the 72 fm. level.

WHEAL LAWRENCE AMALGAMATED.—July 8: St. Lawrence: The men are getting a fair quantity of ore, and are daily hoping to reach the spot where they expect a good pocket of it.—Victoria: On the 1st of the month we set four men here to repair and re-open one of the old shafts to a depth of 26 yards. This the men did up to last evening, and this morning they commenced cross-cutting to intersect two or three lodes that are known to exist a few yards off. The first thing this morning the men found several lumps of fine lead, and I should say there is no doubt but they are on the eve of finding a large deposit.

WHEAL PATRICK.—William Francis, July 7: The 120 yard cross-cut south from engine-shaft is being pushed forward by six men, with full speed; we have seen further traces of lead ore in the rock. The 90 yard cross-cut is being driven with four men, the appearances being very favourable in the cross-course, composed of clay, spar, and gossan.

WHEAL TANKERVILLE.—Arthur Waters, July 8: The lode at Watson's shaft, 3 fms. below the 152, is opening out very well indeed, and the course of ore now in sight thereto (worth 5 to 6 tons per cubic fathom) looks like the top of another great deposit of lead. Seeing this in the regular line of the shaft, and directly under our first great run of ore, we look upon it as a matter of great importance to the company. The great course of ore driven through in the 152 west, 20 fms., from shaft, is a grand sight to see now. It is laid open by No. 2 winze down in hand by stopes. The lode in the 130, driving east of shaft, is producing a little tin. The lode in the winze sinking below the 130, east of shaft, is worth for tin 16c. per fathom. The lode in the 115, driving west of shaft, is worth for tin 12c. per fathom. The lode in the 115, driving west of shaft, is large, and presenting a most kindly appearance, with the production of rich stones of tin, and we hope soon to have something good at this point. The lode in the 90, driving east of engine-shaft, is without change; worth for tin 6c. per fathom. There is no change worthy of especial remark.

WHEAL MARY HUTCHINGS.—Henry Miners, July 7: I have much pleasure in informing the shareholders that after a great deal of trouble and expense, which has proved more than we anticipated from the appearance of the breakage that took place a few months since by the breaking down of the adit level and flooding of the mine, it has again been thoroughly repaired, and the mine is now in fork and cleared to the 32, and the men have again resumed the driving of that level to get under the tin ground gone down in the level above, which, I have no doubt, when reached will prove as productive as in the 22, where the lode in places was worth from 60c. to 70c. per fathom. We have also put men to rise through a piece of ground at the 22, and to drive west of engine-shaft at the deep adit to lay open the main lode for the raising of arsenical muntic and minerals. The new south, or Henderdon, lode, although not so productive at the present time as it has been, is still a very fine-looking lode, and worth about 8c. per fathom. This lode since its intersection has been very changeable; sometimes I have seen it worth from 40c. to 50c. per fathom, whilst at other times it was valueless, yet since its intersection we have raised 2000c. worth of tin from it, and I have no doubt that, from its appearance, as developed it will prove a very valuable lode. Therefore I beg to say we have a good property before us, but it will take time to develop, after which I do not hesitate to say, as I have stated in my former reports, that it will pay handsomely for all money laid out.

WHEAL RUSSELL.—J. Bray, July 8: We have intersected the lode in the 25, east of cross course. I cannot yet say its size; it is large and very promising, producing a little copper ore and muntic. The lode in the stop continues to look well.

WHEAL UNY.—W. Rich, M. Rogers, W. Rich, jun., July 3: There has been very little done in the 160 fm. level during the past few days, owing to the angle bob at the sump shaft breaking in pieces; this has been replaced by a new one made, we think, very strong. The engine is set to work, and we hope to have the bottom levels drained in a few days. The 150, west of incline, is yielding a little tin. The 150 end, east of Goodinge's, carries stones of tin. The 140 end west is worth 5c. per fathom. The 140 end, east of King's, is worth 12c. per fathom. The 130 east is worth 15c. per fathom. The 120 east is worth 12c. per fathom. The 110 end east is worth 12c. per fathom. The 100 east is worth 10c. per fathom. The 40, west of incline shaft, is worth 6c. per fathom. We are making fair progress in clearing the 60 fm. level west. We have sold to-day 13 tons 18 cwt. 2 qrs. 25 lbs.

WHEAL UNITY WOOD.—George E. Tremayne, W. Mayne, July 8: Major's Engine Shaft: This shaft is in a regular course of sinking below the 60, and is now down 2 fms. 3 fms. below the level, the lode is 3 ft. wide, composed of capel, muntic, peach, fluor-spar, and producing some good work both for tin and copper; strong lode, with every indication for an improvement. In the 60, west of shaft, the lode is 3½ ft. wide, composed of arsenical muntic, peach, with good stones of copper and tin. In the 60 east the lode is fully 5 ft. wide, composed of capel, peach, muntic, and worth for tin about 8c. per fathom. The water from this end is increasing, and the appearance of the lode indicates a speedy improvement. This end, we fully expect, will soon drain the water from the winze sinking. In the bottom of the 50, in which we have a good lode for tin. In the 50 cross-cut, north of Harper's shaft, the lode is 3 ft. and wide, worth for tin 12c. per fathom. In a stop in the back of the level the lode is 3 ft. wide, worth for tin 15c. per fathom. A winze sinking in the 40, driving east, the lode is 4 ft. wide, and worth for tin 12c. per fathom. All other parts of the mine without alteration.

FOREIGN MINES.

ST. JOHN DEL REY.—The directors have received the following telegram from Morro Velho, dated Rio de Janeiro, July 4: Produce second division, 11 days of June, 16,250 ots.—\$297.7; yield 10.7 ots. per ton. All going on well.

DON PEDRO.—Telegram from Rio, dated July 6: Produce cleaned up on account of June, 4700 ots.; estimated total for the month of June, 6300 ots.

LONDON.—Letter from mine captain, dated June 9: The ore returned has again been obtained from No. 8 shoot, below the 30. Last week we met with a fissure, which crossed the lode, and disordered the vein; by very diligent searching we found the vein was now up 4 ft.; we took two boxes of work from the same, which from 7 lbs. of mineral gave 10 dwts. of gold. Operations throughout the mine are progressing very satisfactorily, but our native force is not sufficient to spare any hands to carry on any explorations more than what is carried on in the mine; if we do take any blacks from our force to go exploring, we must fall short of our daily output of mineral, and also of repairing our permanent levels. The water being drawn from the mine still amounts to 18,94 cubic feet per minute. The 35 fm. cross-cut has been advanced fairly, but the samples are very poor.

RICHMOND.—Cablegram from the mine at Eureka, Nevada: Hall, London: Week's

Pateley Bridge, Tankerville, and a few others. Pateley shares have again improved to 7s. 7d.; by the official report (which appears in another column) it will be seen that all the important points in operation are being prosecuted with vigour, and bid fair in every instance to realise anticipations. The sinking of the engine-shaft was commenced on Monday, and also the clearing up of the main level westward, which will be driven in whole ground on the course of a lode 6 ft. to 7 ft. in width. The rails have been delivered for the tramway in the eastern part of the mine, unwatered by the Eagle level. Many cross-cuts are being driven, both north and south, to intersect east and west veins at the 20 fm. level, and considering this mine has existed for centuries from workings in the backs of the adit, which is not more than 60 fms. in depth, but has resulted in a main level of upwards of nine miles in length, some idea may be formed of the value of the several great trials now in progress. The Perseverance level will unwater the mine 60 fms. deeper on one side, or the western ground, and the Eagle level, the western ground to a similar depth, laying open courses of ore that, judging by past experience, cannot be taken away for many years. Although the present company has been in possession of the property only a few weeks, a considerable pile of lead ore has been raised, and it is being prepared for smelting.

In Silver Mines there has been a considerable amount of business, the lower prices brought about by realisations to secure profits having induced large investment purchases to be made. Richmond Consolidated shares have been forced down by adverse speculators, who do not hesitate to set on foot the most unfounded statements to suit their own sinister ends. We are officially informed that there is no foundation whatever for the report that it is contemplated to issue additional shares for the purpose of increasing the capital—indeed, in view of the frequent attempts made by spreading unfounded statements to scare shareholders, it is again necessary to caution them against crediting any but official reports. Cablegram received: "Week's run, \$50,000." Doré bars to the value of \$30,000 were forwarded last week for sale. The season's make of bullion amounts to \$352,000; the produce of the refinery for the same period is \$249,000, irrespective of the value in refined lead. We learn that large quantities of base bullion from neighbouring mines are being offered to the Richmond Company to refine at their works. We understand that, with the exception of being short-handed—doubtless due to the recent prevalent sickness at Eureka—every thing was progressing favourably at the mine and works. Sufficient trial has now been made of the new description of furnace—"the hydrocycle," to warrant its adoption; the saving in smelting by it is found to be from 25 to 30 per cent.—the first cost only half of the old former, and its duration much greater. The first set up is now being enlarged, and when altered will be equal in capacity to either of the existing solid brick and stone furnaces. Professor Price names in his report that there were 8000 tons of ore then on the dump. It is evident from this that the present furnace power is inadequate to deal with the increased production from the mine. It is, therefore, most fortunate that a better description of furnace is now attainable, and the demonstration of its great value comes just in time. Since the commencement of operations great improvements have been effected in smelting, even with the old works; but the cost of fuel was still so enormous that in this direction there was the greatest necessity and scope for improvement. The water-jacket furnace, which consists of double case of iron, holding water, surrounding a lining of brickwork, was adopted in Germany and ultimately abandoned. "The hydrocycle furnace dispenses with any lining, the iron water-holding case being in immediate contact with the ore and fuel. The one tried at the Richmond Works was sent over there from Marseilles, and its introduction is due to Mr. Probert, who had satisfied himself of its great advantages." The shares close at 13s. 14d. Eberhardt and Aurora, 8s. 8d.; it is conjectured that the manager continued running the mill until July 4, in consequence of that being a general holiday, as advices have been received up to June 20, when most satisfactory progress was being made; the result of the month's run cannot fail to be equal to anticipations. Flagstaff, 2s. 2d.; Last Chance, 1s. 12d.; Tacoma, 8s. 8d.; Emma, 1s. 12d. To 2s. 6d.

The Market for Foreign Gold Quartz Mining Shares has been steady, and an average amount of business transacted without material change in current quotations. St. John Del Rey stock is slightly firmer at 390 to 400, ex div. The produce for 11 days, the second division of June, is 16,250 oits., value 6297s., at 7s. 9d. per oit, yield 10.7 oits per ton. This is a somewhat lower produce than for the corresponding section of May, but it cannot be expected that the yield can always be uniformly maintained without fluctuation. Frontino and Bolivia 8s. 8d. to par; the produce cleaned up for account of June is 4700 oits., and the estimated total for the month is 6300 oits. Almada and Trito, 8s. 8d.; Chontales, 1s. 12d.; Javali, 8s. 8d.; Port Phillip, 1s. 12d. The Sierra Buttes, 1s. 12d.; Do. Plumas Eureka, 1s. 12d. The Sierra Buttes and Plumas Eureka clean-up for June are respectively estimated at \$33,000. London and Californian, 8s. 8d.; the clean-up at this mine for June is estimated at \$20,000, which gives a profit on the month of over 2300%. Independence, 2s. 2d. Capt. Kitto reports the quantity of ore crushed in 32 days was over 1400 tons, which yielded about \$5.4 per ton, and that so large an amount per stamp-head—viz., over 2 tons per day—had never been crushed by the mill before, and that the quantity per stamp-head would still increase. He also states when the new mill joins working with the present mill, and his alterations in amalgamating are carried out, the gross will be \$15,000 to \$20,000 per month, at a total cost, inclusive of the outlay required for opening out the mine in depth by the said tunnel, of \$8000 to \$10,000 per month. Capt. Kitto also reports that he has engaged as superintendent Capt. Jenkins, of the Sierra Buttes, who has been at that mine 18 years, and that Capt. Jenkins, who he believes to be one of the best gold miners in California, declares that Independence, if worked as directed by Capt. Kitto, will be quite as good a mine as the Sierra Buttes. A telegram received this morning from Capt. Kitto reports the discovery of a new body of \$7 ore, of the estimated value of \$800,000. As this ore can be worked at \$3.2 per ton, the net value of the discovery is estimated at 80,000, or 20,000, more than the total market value of the mine.

In Copper Mines the variations have been unimportant. Cape Copper, 3s. 4d. to 3s. 6d.; the annual meeting was held on Wednesday, and the details are reported elsewhere. With respect to the returns and costs, it appears that in 1873 they returned 7720 net dry tons; and in 1874, 10,206 tons; in 1873 the Swansea assay was 32 per cent., and in 1874 30 per cent.; in 1873 the cost 15s. 7d. per unit, and in 1874 10s. 9d. per unit, whilst the price obtained was 10s. 5d. in 1873 and 15s. 7d. in 1874, and the profits for the two years were respectively 56,000, and 94,000; thus the quantity raised, the cost of raising, and the price obtained, were all in favour of the company for 1874, and the only drawback was that the assays were not so high as might be expected. Referring to the Mammoth Mine, a Salt Lake paper, just to hand, says:—

THE MAMMOTH MINE.—Again we have to report from the Mammoth Mine, Titic, where the owners have recently struck a bonanza which promises to make billions of them. The new find is in the main tunnel, at a point where it was described 18 months ago. The body of ore is said to be richer than anything before found in the mine, and it grows richer as greater depth is attained. A shaft on the vein 40 ft. deep had recently been sunk, and the ledge is running into a free mining rock, which is rich in silver. There is a bright future for the Mammoth.

We believe this relates to the property known as the Mammoth, adjoining the Mammoth Copperopolis, owned by an English company. The news is necessarily of importance to that company, as bearing out the opinions expressed by various experts that great improvements might be expected by deeper workings. A large mass of ore has already been opened out on the Mammoth Copperopolis by very shallow works. The Mammoth shafts are down very much deeper, and the rich body of ore stated to have been struck may possibly be found within the precincts of the Mammoth Copperopolis. At all events it is a great encouragement to perseverance.

Scottish Australian, 1s. 12d. to 1s. 12d.; the sales of coal during April amounted to 7094 tons, exclusive of coal (on this occasion more than usual) put on board vessels, the loading of which had not been completed by the end of the month, and which will, therefore, be included in the next monthly return; in April, 1874, the output was 10,516 tons.

Lead Mines have been represented by Van, which have changed hands at 23 to 24; everything continues satisfactory. The 75, west of shaft, is now worth 70s. per cubic fathom. Van Consols, 2 to 2s.; the deepening of the two shafts is being carried on with all speed. Pennerley, 1s. 4d. to 2s.; the mine is looking well, and the usual quantity of ore is being raised. Bog, 8s. to 1s.; the mine continues to improve as the work of clearing and driving on the lower levels progresses. The 163, driving west, on the main lode, is worth 30s. per fathom; and the rise in the back of this level will average 3 tons per fathom. All other points looking well. Assheton, 1s. 4d. to 1s.; the mine fully maintains its value at the various points of development. Great West Van, 10s. to 15s.; all work progressing with regularity.

In Tin Mines the operations have been rather narrowed by the decline in the price of tin. South Condurrow, 5s. to 5s.; at the meeting, reported in another column, the accounts showed a profit on the sixteen weeks' working—ending with the cost for May of 1653/-, making, with the balance brought forward from the last account, 2708/- A dividend of 5s. per share was declared, which would absorb 1530/- leaving 1177/- to be carried forward. Wheal Peevor, 2s. to 3s.; at the meeting, reported in another column, the accounts showed a debit balance of 979/- a call of 5s. per share was made. Cathedral, 2s. 6d. to 3s. 6d.; the most satisfactory accounts continue to be received from the mine of the development of the copper lode, which is being attended with the most satisfactory results.

Penstruthal, 10s. to 11s.; the deeper the workings the more productive the Highburrow lode is found, and the opinion of all the experts who have inspected the property is that a substantial mine is being developed.

Subjoined are the closing quotations:—

Assheton, 1s. 4d. to 1s. 4d.; Bog, 8s. to 1s. 4d.; Carn Brea, 39 to 40; Devon Great Consols, 2s. to 3s.; Dolcoath, 40s. to 42s.; East Lovell, 7s. to 8s.; East Caradon, 1s. 4d. to 1s. 4d.; East Van, 1s. 4d. to 1s. 4d.; Great Laxey, 1s. 4d. to 1s. 4d.; Hindon Down, 1s. 4d. to 1s. 4d.; Parry Mountain, 1s. 4d. to 1s. 4d.; Pateley Bridge, 7s. to 7s.; Pennerley, 1s. 4d. to 2s.; Roman Gravels, 1s. 4d. to 1s. 4d.; Tincroft, 1s. 4d. to 1s. 4d.; Tinkerville, 1s. 4d. to 1s. 4d.; Van, 2s. to 2s.; West Basset, 4s. to 5s.; West Tankerville, 1s. 4d. to 1s. 4d.; Birdseye Creek, 1s. 4d. to 2s.; Blue Tent, 5s. to 5s.; Cedar Creek, 1s. 4d. to 1s. 4d.; Cape Copper, 33s. to 34s. (ex div.); Chontales, 1s. 4d. to 1s. 4d.; Colorado Terrace, 2s. to 2s.; Eberhardt and Aurora, 8s. to 8s.; Emma, 1s. 4d. to 2s.; Flagstaff, 2s. to 2s.; Last Chance, 1s. 4d. to 1s. 4d.; Malpas, 5s. to 5s.; Malabar, 5s. to 5s.; New Querebara, 3s. to 3s.; Richmond Consolidated, 13s. to 14s.; San Pedro, 1s. 4d. to 1s. 4d.; Sweetland Creek, 2s. to 3s.; South Aurora, 7s. 10d. to 9s. 10d.; Teoma, 5s. to 5s.; United Mexican, 2s. to 2s.

COLLIERIES AND IRON WORKS.—Beyond an advance in New Sharston, and a further decline in Rhymer Iron, and Lydney and Wigpool, very little alteration has taken place from last week. Where shares have been offered slight concessions have had to be submitted to by sellers, but any offer at less than the rates current brought in ready buyers. The shares principally dealt in have been Alltarn, Bilson and Crump, Cardiff and Swansea, Ebbw Vale, Thorp's Gwaenor, Chapel House, New Sharston, Rhymer Iron, Newport, Abercarn, and a few others. Great Western Colliery, 9 to 10, but very little doing; South Wales Colliery, 15 to 16; Silkstone Fall, 1s. to 1s. Mr. T. Hampton, whose name will be remembered by some in connection with the Phoenix Bessmer Steel Company, of which he was a promoter, also managing director, has found it necessary to file a petition in the Sheffield Bankruptcy Court. Owing to an unfortunate accident some time ago, Mr. Hampton has been unable to give much personal attention to his business. His liabilities are understood to be about 20,000. New Sharston shares have advanced from 3s. 5d. to 5s. 7d., but there has not been much doing. The shares of the Ffessall Colliery are 1s. better, now 8 to 8 dls. The directors of the Newport Abercarn Black Vein Steam Coal Company have issued their report, from which it appears that the Patent Nut and Bolt Company, who sub-leased a distant section of the Newport ground, are now fast approaching this company's limits, and as they are driving on the level of the Black Vein considerable interest is being attached to their operations.

Notwithstanding the almost unparalleled hardness of the rock, good progress has been made with the sinking of the three pits, and the directors are still in hopes "that as was stated some time ago, the chalcocite vein will be laid bare in the month of August." At the end of last month No. 1 pit had been sunk 126 yards; No. 2, 119 yards; and No. 3, 142 yards. The accounts are presented in a clear and concise form, and they show that the total expenditure since the commencement of operations has been 107,670. 13s. 4d., of which sum no less than 76,292/- has been expended in machinery and permanent works, which are all ready for use the moment coal is reached. This property is thought very highly of in the immediate neighbourhood, and it has been a great disappointment that the rocks, hard as adamant, should have required more time and money than was anticipated when the prospectus was issued. However, if coal is reached next month shareholders may consider that they have passed through the worst.

Cardiff and Swansea, 3s. to 3s.; the adjourned extraordinary meeting was held yesterday to receive the report drawn up by the committee of shareholders appointed to investigate the charges made by the Chairman against Mr. John Cory. The attendance was moderate, and the proceedings rather languid. It was ultimately decided to receive the report, and adjourn further proceedings until the annual general meeting, which is expected to be summoned about the 20th Inst. Chapel House, 3s. to 3s.; Bilson and Crump, 9s. to 10. Alltarn Colliery, 5 to 5s.

SHEFFIELD.—Messrs. Liddell and Heard, stock and share brokers, in their weekly report, say: A steady business has been done during the past week, no change of importance taking place. The following are current rates:—Bilbao Iron Ore Company, 5 to 4s.; Holbeck, Vaughan, and Co., 15s. to 15s. prem.; Brown, Bayley, and Dixon, 32s. to 31s. 12d.; Charles Cammell and Co., 8 to 7s. 12d.; 7s. to 7s. 12d.; Charlton Iron Company, 35s. to 33s. 12d.; Ebbw Vale Steel and Iron Company, 12 to 11s. 12d.; G. and J. Brown, and Co., 80 to 7s. 12d.; Hopkins, Gilks, and Co., 6 to 5s. 12d.; John Brown and Co., 10s. to 12s. prem.; Merry and Cuningham, 7s. 6d. to 7s. 12d.; Parkgate Iron Company, 23s. to 24s. prem.; Sheepbridge Coal and Iron Company, 24s. to 24s. prem.; 24s. to 24s. 12s. prem.; Staveley Coal and Iron Company, 6s. to 6s. prem.; 6s. 9d. prem.; Bilkstone Fall Colliery Company, 1s. to 1s.; Sheffield Waterworks Company, 9s. to 9s. 9d.; Sheffield Gas Company, 20s. to 20s.

THE COPPER TRADE.

During the quarter ending June 30 the quantity of copper ore, the produce of Cornwall and Devonshire, sold at the Cornish Ticketing, was 11,717 tons, which contained 821 tons 17 cwt. fine copper, and realised 60,317. 2s. 6d., being equal to an average of 5l. 3s. per ton of ore, and 73s. 8d. per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea amounted to 6260 tons, which contained 1038 tons 3 cwt. of fine copper, and realised 82,793. 16s., being equal to an average of 13s. 4s. 6d. per ton of ore, and 79s. 19s. per ton of copper in the ore. The average produce of the ore sold at the Cornwall Ticketings was 7 per cent., whilst that sold at Swansea gave an average produce of 16s. per cent. From this it will be seen that the aggregate sales by ticket were 17,977 tons ore, containing 1860 tons 0 cwt. of fine copper, and realising 143,110. 18s. 6d. The subjoined is a summary of the periodical sales at the Cornwall and Swansea Ticketings respectively. The ore sold at the Cornwall Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
April 1...	£107 11 0 ...	7s. 12d.	£25 1 0 ...	13s. 11d.	1655 ...	119.19c.	£8,349 15 0
22...	111 16 0 ...	7s. 5 0 ...	14 5 ...	1992 ...	138 4 ...	9,973 18 0	
May 6...	108 13 0 ...	7s. 5 0 ...	15 4 ...	1258 ...	95 11 ...	6,928 9 6	
20...	114 7 0 ...	6s. 5 0 ...	14 9 1/2 ...	3173 ...	216 3 ...	15,994 13 6	
June 3...	118 8 0 ...	7s. 5 0 ...	14 10 ...	1556 ...	108 19 ...	8,076 5 0	
17...	116 19 0 ...	6s. 6 0 ...	15 4 1/2 ...	2083 ...	143 1 ...	10,999 3 6	
Total for the quarter					11,717 ...	821 17 ...	£60,317 2 6
Quarter ending March, 1875					10,960 ...	748 12 ...	£53,953 13 0
Quarter ending Dec., 1874					12,959 ...	917 17 ...	£63,398 19 6
Quarter ending Sept., 1874					12,220 ...	882 2 ...	£57,488 8 0
Total for the year					47,856 ...	3370 8 ...	£239,158 3 0
Showing a quarterly average of					11,964 ...	842 12 ...	£59,759 11 0
Corresponding quarter June, 1874					12,013 ...	904 11 ...	£57,692 15 0

The ores sold at the Swansea Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
April 6...	£99 16 9 ...	24s. 7d.	£19 13 6 ...	15s. 9d.	1123 ...	270.7c.	£22,067 9 6
27...	100 18 6 ...	15 3-10	11 19 2 ...	15 9 ...	1517 ...	250 3 ...	£15,190 19 0
May 18...	102 6 10 ...	17 13 16	14 7 ...	16 1 ...	1268 ...	232 17 ...	£18,205 5 0
June 15...	104 0 6 ...	12 7-16	10 9 ...	16 3 ...	1118 ...	189 1 ...	£11,307 8 6
29...	102 11 6 ...	13 1/2	10 11 ...	15 10 ...	1234 ...	183 10 ...	£18,052 14 0
Total for the quarter					6260 ...	1038 3 ...	£82,793 10 0
Quarter ending March, 1875					4335 ...	1046 3 ...	£84,946 3 6
Quarter ending Dec., 1874					5998 ...	1463 8 ...	£121,233 11 0

NOTICES TO CORRESPONDENTS.

Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

VALUE OF METALS AND MINERALS.—Will some correspondent kindly give me information as to the weight of the bottle of quicksilver I see quoted in the Journal; also the value of nickel, of cobalt, of ore containing 28 per cent. nickel and 4 per cent. cobalt, of chrome ore with 50 per cent. oxide, of antimony, and of silver.—H. W.: Whitehaven.

PENNERLEY.—As an outsider and small shareholder in the above mine, it is incomprehensible to me the mode and manner in which shares in mines are made to rise and fall. Some time ago the shares in this mine, although not paying, stood at double the price they do now, whilst the mine has cleared upwards of £2000. these last twelve months, and paying fully 200/- a month profit at present.—A SMALL SHAREHOLDER: Belfast.

BLOW-PIPE ANALYSIS.—“J. K.” (Merton).—There is certainly much difficulty in keeping up a steady blast without much and constant practice, but the difficulty can be readily got over by those who can only blow from the lungs (and some never acquire the knack of blowing otherwise) by the use of Hendy's blow-pipe. It has, probably, never been offered for sale in this country, but can readily be made. An ordinary Black's blow-pipe has another small tube inserted opposite that which carries the air to the flame, and upon this a child's air-ball is fastened with a silk thread. A globule of india-rubber is placed in the pipe, and two pins are passed through the pipe to prevent its going too far from the mouthpiece. Upon now blowing part of the wind goes to the flame and part to distend the air-ball, so that when stopping to take breath the contraction of the air-ball keeps up the blast, the globule of india-rubber forming a ball valve in the mouthpiece. Care and tranquillity are required in blowing, for at first the tendency to nervous haste through needless fear that there will not be enough air in the ball to last till blowing recommences frequently leads to the ball being blown till it bursts. No doubt Messrs. Griffin, of Garrick-street, would make you one to order at about twice the price of their ordinary Black's pipe (say at 2s.); if not, you can have it made by a tinsmith and black it over, except the part held in the mouth, with a pennyworth of Brunswick black.

GOLD COMPANY.—Can any of your readers give me some information respecting the above company? I hold a considerable number of shares, and, therefore, have a great interest in the concern.—F. B.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

SCALE FOR ADVERTISEMENTS.—One shilling for general advertisements is—for six lines and under, 4s.; per line afterwards, 8d. Average, 12 words per line.

Received.—“W.” (Liverpool). Col. Berton will be in London shortly, when you will have an opportunity of addressing him personally: all particulars will appear in the Journal.—“F. B.”—“A. R.” The examination queries will appear in next week's Journal.—“A Shareholder” (New Consols)—“Mentor”—“Y.”—“Reason.” We cannot account for the discrepancy.—“E. S.”

IMPORTANT NOTICE—REDUCTION OF POSTAGE ON THE “MINING JOURNAL.”—In consequence of the new POSTAL CONVENTION, which came into operation on July 1, the postage of the Mining Journal to many countries will be reduced to one-fourth. Henceforth the subscription will be 17. 10s. 4d. per annum (39 francs), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxembourg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta, Turkey, Morocco, Tunis, and the Canary Islands. Spain 17. 10s. (50 francs).

AVIS IMPORTANT.—AUX ABONNÉS ÉTRANGERS DU “MINING JOURNAL.”—À cause de la nouvelle CONVENTION POSTALE Il y aura, à partir du 1er Juillet courant, une grande diminution du prix de l'abonnement du Mining Journal pour bien le peu que l'on ait été élevé. À partir du 1er Juillet le prix de l'abonnement sera de 39 francs, le port compris, pour l'Autriche, Belgique, France, Danemark et ses dépendances, l'Egypte, l'Allemagne, la Grèce, l'Italie, Hollande, Portugal et ses dépendances, Roumanie, Russie, Servie, Suède, la Suisse, la Turquie, l'Afrique septentrionale, etc. Le montant, si l'on le veut, sera touché à domicile, la fin de l'an. L'abonnement continuera sauf avis contraire.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, JULY 10, 1875.

THE DECREASED CONSUMPTION OF COAL.

Various reasons have been assigned for the falling off in the consumption of coal during last year as compared with 1873, so contrary to the calculations of those who have been supposed to speak with authority on the subject. In some instances the decline has been attributed to the action taken by the miners in some districts to limit the production for the purpose of keeping up wages. This is a fallacy, however, that will not stand the light of investigation for a moment, no more than will the computations on the subject made by Sir W. ARMSTRONG, the late Mr. JEVONS, and others, for it is evident that no rule can be applied by which we can obtain a moderately approximate idea of what the consumption of coal is likely to be in the course of a given number of years. Certain rules, or we may say laws, have been laid down, which were supposed in some way or other to govern the production and consumption of coal, but they have proved the reverse of reliable. Sir W. ARMSTRONG when writing on the subject gave it as his opinion that the output of coal would be progressive, and increase in each year over the previous one, excluding temporary derangements, about 4½ per cent., so that the consumption in about 15 years from the present time would be about 240,000,000 tons per year. It is evident that the quantity named would be very far indeed beyond the mark, as we already see that the calculation as to a regular progressive increase yearly cannot be maintained.

Mr. JEVONS, in his work on “The Coal Question,” laid it down that as every improvement for economising labour must result in the increasing of the consumption of coal, so that the consumption of it would keep pace with the progress of population and the extension of our manufactures. But it is evident that the learned Professor did not give sufficient consideration to the economy which might be brought into operation in the quantity of coal required for smelting, manufacturing, and household purposes. Now, a very great reduction of late years has taken place in the amount of fuel that was once necessary for all such purposes. Indeed, we have it recorded that owing to the high price last year there was a great decrease in the consumption of house coal in London, and almost every large town in the kingdom, even over the previous famine year. It should also not be forgotten that we have been in the habit of exporting to foreign countries more than one-tenth of all the coal we raise, and that is a source which is now leaving us, for it has been falling off, and no doubt will do so still more, owing to the many coal fields being opened in different parts of the world. To some extent this was anticipated, for in the report of the Royal Commission on Coal, which sat in 1873, it is stated—

“The probable development of the enormous coal fields of North America, and those of India, Japan, and other countries, and the more effective working of the known coal fields of Europe, will probably prevent any considerable increase in the future exportation of British coals.”

But the fact is our exports are declining, whilst our productive power is increasing with a rapidity hitherto unknown, and it is even questionable whether the quantity of coal raised during the present year will exceed, if indeed it equals, that of the last one, for coal is an article that cannot be kept in stock, like most other commodities, for long exposed to climatic influences it soon becomes of little value. Consequently colliery owners raise only sufficient to meet the requirements of their customers for reasonable time, and of late so limited has been the demand that large numbers of miners have had to be content with three or four days' work in the week. In fact, despite the stoppage of so many collieries in South Wales, and strikes in other districts as well, coal has been more than sufficiently abundant during the last half-year.

With regard, however, to the decrease in the consumption of coal last year, small though it was, it sufficiently illustrated the state of trade pretty generally in most parts of the country. In some districts the miners have done tolerably well, but in those where the

men have been on strike or lock-out, such as in Lancashire, Yorkshire, and South Staffordshire, there was a falling off in the output of coal. How those localities were actually affected will be seen from the following returns of the quantities of coal raised during the last two years in the United Kingdom:—

District.	1873.	1874.
Northumberland, North Durham	Tons 13,951,404	13,692,273
South Durham and Westmoreland	17,438,017	17,912,543
Yorkshire	15,311,775	14,827,313
Derbyshire, Notts, &c.	11,565,000	12,232,296
North and East Lancashire	9,560,000	8,063,974
South Staffordshire and Worcester	9,463,559	8,500,000
North Staffordshire, &c.	6,612,519	6,289,929
Monmouth, &c.	6,355,740	6,815,757
West Lancashire and North Wales	9,250,000	9,875,762
South Wales	9,844,523	11,452,358
Scotland, East	10,142,039	10,182,326
Ditto, West	6,715,733	6,606,335
Ireland	102,435	139,213
Total	127,016,747	126,590,108

Now, it will be evident from the above figures that as there was no dearth of coal for all purposes, but, on the contrary, a plethora, that the strikes and disputes in no way affected the trade, and that had every man been at work, or had as much as could have been given to him, there would still have been something like the same deficit. The only effect of the employing more men would have been to reduce the price of coal, and to a very slight extent it might be that in some districts wages would have come down. But there cannot, we believe, be any doubt but that the reason for so little coal being consumed was entirely due to the state of the iron trade. As yet we have not received the returns of the quantity of pig made last year, but we have a very fair means of coming near the mark. In the year 1873 the ironstone raised in the United Kingdom was 15,577,499 tons, whilst in 1874 it was only 11,693,186 tons, being a decrease on the year of 3,884,313 tons. Now if we take the ironstone as only producing on an average 28 per cent. of pig, there would be a decline in the make on the year of close upon 1,000,000 tons, so that giving but 2 tons of coal for the production of 1 ton of pig-iron this would represent a falling off in the quantity of coal required for smelting of close upon 2,000,000 tons as compared with 1873. There is, therefore, no doubt but such has been the principal cause of the falling off in the consumption of coal which took place last year. But there is now, we think, every reason to believe that with cheap fuel there will be an improvement in the trade, for the high price of that important article, and the high wages required by the workmen, have done much towards bringing about the stagnation of which complaints have been so general during the whole of the present year on the part of our ironmasters and manufacturers.

STAFFORDSHIRE IRONWORKS MANAGERS, AND THE BELGIAN IRON TRADE.

The nature of the competition which South Staffordshire, as well as other English ironmaking districts, is experiencing from Belgium has just been brought prominently before the members of the South Staffordshire Mill and Forge Managers' Association by Mr. W. Farnsworth, manager of the Iron and Tin-Plate Works of Messrs. E. P. and W. Baldwin. In a comprehensive and well-arranged address, laid before the members of the Association, he has given “personal observations and statistics made and acquired during a journey through most of the principal coal fields and ironworks in that country.” Sketching the early history of the iron trade of Belgium, the essayist showed how the Romans had worked the iron ores of that nation in the same manner as that in which they had worked certain of the iron ores of Great Britain, and that in Belgium, as in the Forest of Dean, blast-furnaces were still being supplied with the furnace slag of the Romans. That such slag was likely to contain a large quantity of iron was to be inferred from the circumstance that the stone was smelted in furnaces built into the ground in the side of elevations, and that the blast was obtained by openings in the direction of the wind. Iron, therefore, could not at that time be smelted excepting upon windy days. Noting the establishment of the modern iron trade in Belgium, Mr. Farnsworth dwelt upon what had been done by John Cockerill, the founder of the trade there, whom the Englishman in Belgium always had referred to as “your great countryman.” The John Cockerill Company at present existing possess the largest undivided works in the world. There were ironworks in England and Wales where more hands were employed all told, but the different departments were often great distances from one another. At Cockerill's, however, all were compact, and, comparatively speaking, under one roof. Here coal and ironstone were mined, coke was made, ironstone was smelted, finished iron was rolled, great engines and other machinery were produced, and in 1872 the products sent away were valued at ten millions sterling. Enormous and rapid strides had been made in the Belgian iron manufacture. In 1848 they sold iron to only their near neighbours, such as France, Germany, and Holland, but in 1868 they were competitors with us all over the world, and even invaded our own home trade by sending into Great Britain in that year no less than 11,630 tons of iron. In 1871 they sent 220,329 tons; in 1872, 243,170 tons; in 1873 the importation from Belgium fell off 51,677 tons, leaving the aggregate quantity of that year at 191,493 tons. Mr. Farnsworth made pertinent reference to the fact that Belgium was doing a large trade in iron girders in particular, instancing that the girders required for extensive buildings alike in London, Manchester, and Sheffield had been purchased from Belgium; and he might have added that Belgian flitch-plates had just been used in the carrying of a roof of an ironfoundry in South Staffordshire. Next, he entered into details, as a practical ironworker, of much interest to his auditory, and to the trade which they represented, relative to the quality of the iron mostly produced in Belgium. Of this and of the coal of that country he evidently had no high opinion. He said that the rails which an English ironmaker and himself inspected in the works, and which were going off in a finished state, were certainly such goods as would not have been passed in England. When he called the attention of the Belgian overseer to the flaws in the rails the response was, “You would not have it quite sound, would you?” Nor was the unsoundness exceptional. They did not find one rail which would not in England have been called defective, or that would not need patching. The rails, however, were required mostly for Government lines, and the Government had an interest in the works.

Having noticed that the sheets which the Belgians were rolling were both red-short and cold-short, he was surprised when on leaving the iron mills and going into the engine works he found that locomotive dome casings were being made from Belgian sheet-iron; when, however, he examined these casings he found none perfect, and all had had to be patched. He knew well what kind of iron was required to stamp out a perfect dome, for he had been engaged in the making of it, and it had occupied much of his attention; he was not, therefore, surprised that, remembering the quality of the iron which the Belgians mostly produced, they should not out of their own metal be able to make perfect dome casings. Such domes as they sent away would not be passed by English engineers. Whilst, therefore, the competition of Belgium in common qualities of iron was a serious matter, English ironmasters had in the superior quality of their products much to be proud of. It must not, however, be forgotten that the Belgians could get raw iron from Middlesborough delivered in Antwerp at as cheap, if not at a cheaper, rate than it would cost to bring the same raw iron into South Staffordshire. They likewise had facilities for importing the superior ores from Spain and other countries, and for the making of steel. They were importing those ores even as they were being imported into England by the English steel makers, and the steel which was being produced at the Bessemer steelworks in Belgium was of an unexceptional quality, and being run from the blast furnace into the converters great economy was secured. Belgium, therefore, which stood first on the list, and it behaved the managers of the ironworks in South Staffordshire to use unfailingly all their skill, tact, and energy to produce good iron at the cheapest possible rate.

If this should be done we have no fear either for mid-England or

the remoter iron-making districts of this country, for at the same time that the Belgian make had been increasing the make of English iron had increased in a yet more considerable degree. As to their own district, their prosperity in the future depended upon the strictest attention to quality. Excellent quality was to be secured not only by the superiority of the natural products, but likewise by the superiority of manipulating skill. During the discussion which followed the reading of the paper instances of the inferior quality of Belgian iron were given, and it was also hinted that the Belgians might be able to continue to undersell England in the inferior qualities by the capability of the workmen to take lower wages, through being able to live on poorer fare, than the English ironworker required. To this Mr. Farnsworth responded that the English ironworker entertained very erroneous views as to the living of the Belgian ironworker. He could testify, after an inspection of refractory arrangements at the leading ironworks, that the Belgian ironworker lived as well, and fared as abundantly, as the best paid ironworker in England, and the respectful, though independent and intelligent, demeanour of all classes of operatives, from the boy in the mines to the most skilled artisan in the engine-works, would put to the blush only too many of a similar class of workpeople in England. Everywhere, however, throughout Belgium the Englishman was held in the highest regard. Mr. Farnsworth assures the mill and forge managers of South Staffordshire that the ironmakers of Belgium were respectable rivals, and that their rivalry might be expected to increase.

THE CARDIFF AND SWANSEA COAL COMPANY.

In another column will be found the report of the adjourned special meeting of this company, and of the conclusions arrived at by the Investigation Committee. The committee were appointed to investigate into certain charges against Mr. JOHN CORY, one of the vendors and managing director, and also into all matters connected with the formation and subsequent management of the company. They appear to have gone somewhat beyond the scope of their power, for they have arranged what is termed a “compromise” with the vendors, subject, of course, to the approval of the shareholders. “Compromise” means that a wrong has been done to the shareholders, and the question for the latter now to consider is whether the proposed terms are an adequate compensation for the vendors to pay. We had expected that the debentures would have been completely wiped away, instead of which £2,000/- is to remain, only that the time of payment is extended from 4 and 5 years to 10, 15, and 20 years. The vendors ought to take the whole of this amount in ordinary shares to place the company in anything like the position promised in the prospectus, and the shareholders can, undoubtedly, legally insist on the terms of the latter being fully verified. The correspondent says in reference to the charges against Mr. JOHN CORY, that he was guilty of an irregularity in not disclosing the correspondence with the Government Inspector. This mild way of expressing censure is, perhaps, the price paid for the “compromise,” but the unfortunate shareholders and the commercial public will dub such conduct by a very different name. For any director of a company to withhold important correspondence, involving large expenditure, from his colleagues is, to say the least, the grossest possible irregularity; and any director who does so should be immediately removed from his office. That falsification of accounts at the Pentre Colliery is established, and it is almost incredible to find that the officials guilty of this are still in the employ of the company.

The main feature of the proposed compromise is that the shareholders are to receive a 7 per cent. preference (not a guarantee) of profits over the vendors' shares; but the preference is only from year to year, and is not cumulative. Coupled with this, we have the fact that Messrs. CORY and YEO (the vendors) have the absolute right to sell all the coal for a number of years, so that the shareholders will have to look sharp after their property. The vendors sell their collieries to a company, but take care to reserve to themselves the absolute right of selling all the coal for a number of years. If there is not an independent board to look after them, the shareholders will be completely at their mercy. But the most astounding piece of advice to the shareholders is, that they should remove the chief offices to either Cardiff or Swansea; and this, added to the 7 per cent. not being cumulative, and the vendors alone having the right to sell the coal, will practically place the entire management in the vendors' hands. Be it remembered that this advice did not proceed from the committee, but from some of them; and we are glad to find that the suggestion was strongly opposed by a number of the committee. Bearing in mind the unfortunate and miserable management of the vendors so far, it is astonishing to find anyone even hinting such a suggestion. Without a London chief office the market value of the shares will be materially depreciated, and it is a noteworthy fact that nearly all successful companies have their principal offices in the metropolis. As one of the shareholders aptly observed at the meeting, it was one way of getting rid of Col. SHAKESPEARE to remove the offices, and this would be a piece of the grossest folly and ingratitude.

Whatever the proposed compromise is worth to Col. SHAKESPEARE alone is due the credit of having initiated the proceedings which have led to it. No doubt he was ably assisted by his colleague Mr. RICHARD SHAW, M.P., and by Mr. WILLIAM THOMAS, the generally admitted efficient mining engineer of the company. The latter appears to have incurred the particular displeasure of the vendor by his straightforwardness, but he undoubtedly did his duty admirably in placing everything before the board. In our opinion Mr. SHAW, M.P., acted unwisely in retiring, but that circumstance is only another proof of the independence of Col. SHAKESPEARE, who alone, after Mr. SHAW's resignation, stood up for the shareholders' rights. Whatever the future constitution of the board may be, it ought to be kept in his place, and four or five thoroughly independent shareholders, who have no connection of any kind with the vendor, should be selected to act with him. It is but right to add that those who advised the removal of the Chairman, and we accept their denial, but it is clear that it will inevitably lead to that. The further suggestion by the same parties to pay the directors only 500/- per annum, in a company with 400,000/- capital, appears to us to be ridiculously inadequate if men of position, integrity, and independence are to be secured. Well might the two gentlemen who made the suggestion state that upon no consideration would they act on the board which was to be so niggardly paid. What the shareholders want is efficient men on the board, and they may rest satisfied that the only way to secure this is to pay the directors properly.

One feature of the meeting was particularly suggestive. Not a single shareholder knew the purport of the report until read by the Chairman of the Investigation Committee. But what had taken the latter one month to consider the shareholders were expected in master in five minutes. The most strenuous efforts were made by the partisans of the vendors to obtain the absolute approval of the company to the compromise without absent shareholders having had an opportunity of considering it. This indecent haste appears suspicious, and indicates that there is considerable anxiety to complete the settlement.

INSPECTORS OF COAL MINES.—Mr. Serjeant SPINKS asked the Secretary of State for the Home Department whether, having regard to the provisions and intent of the Coal Mines Regulation Act 35 and 36 Vic. c. 76, s. 44, Her Majesty's Inspectors of Coal Mines should be permitted to attend as witnesses before parliamentary and other tribunals, and to give evidence there, upon the terms of receiving special fees and remun

The same rule applied as in the case of an ordinary subpoena *duces tecum* to produce official documents in a court of law. If in the Secretary of State's opinion it was not for the benefit of the public service that the documents should be produced, instructions were given to the officer to state that circumstance to the Judge, who in such cases invariably refused to allow the production of the documents. The Inspectors of Coal Mines were not permitted to receive special fees and remunerations in excess of the allowance for their expenses as witnesses, nor were they permitted to use any special information they might have received in the course of their employment as confidential communications, whether such communications were in the nature of maps, plans, surveys, &c., required by the Coal Mines Regulation Act to be kept secret or otherwise. He was not aware of the necessity of making any regulations on the subject.

GOVERNMENT INSPECTION OF COPROLITE WORKS.—It appears that the large number of "accidental deaths" having for some time past been happening in connection with the coprolite works of Cambridgeshire, the Home Secretary, acting upon the recommendation of able representatives of the working men, has decided that all such works come under the operation of the Metalliferous Mines Regulation Act, which includes all workings for mineral other than coal. He has, therefore, instructed Mr. Thomas Evans, one of the most experienced of the Mine Inspectors, to collect evidence on the spot, and report the result to him. General satisfaction is expressed among the men as to the manner in which Mr. Cross has taken up their case.

CHESHIRE SALT TRADE.—An extreme demand has continued during the month of June, which will probably be repeated during July, as there are ships for 20,000 tons already on the berth for the East. The shipments during the month have been—to the United States, 11,287 tons; British North America, 7316 tons; West Indies and South America, 798 tons; Africa, 1705 tons; East Indies, 39,041 tons; Australia, 2223 tons; Prussia, 1355 tons; Russia, 12,677 tons; other Baltic and North Sea ports, 3578 tons; France and Mediterranean, 40 tons. Coastwise: Newcastle, 1590 tons; rest of England, 477 tons; Scotland, 7153 tons; Ireland, 328 tons; Holland, 246 tons; Belgium, 2969 tons; total export from Liverpool, 85,091 tons; total from the Mersey, 112,000 tons; previously this year, 306,382 tons.

TIN FROM TASMANIA.—We have for some time past heard that tin in considerable quantities might be expected to come from Tasmania, and we can now announce the arrival of the first shipments. There can be no doubt as to the excellent quality of the tin, which is soft, and of very good colour. It has been most carefully assayed for the importers by Messrs. Johnson and Matthey, and they return it as containing the high percentage of 99.96 per cent. of pure tin. It has also the valuable quality of being free from even a trace of wolfram, so injurious to tin, and so often found in combination with it. It is superior to Australian, and will by many, we think, be preferred to Straits. We understand it is being sold at the price of the latter. The shipments from Tasmania will not be to an extent—certainly not for the present—to influence our market; the whole quantity arrived and coming forward this year will probably not exceed 300 tons, a very moderate quantity, but ample sufficient to enable the importers to introduce it generally to the trade, by whom there can be no doubt it will be greatly appreciated.

THE PHILADELPHIA EXHIBITION.—Mr. Cunliffe Owen, C.B., the British Commissioner at the Philadelphia International Exhibition for 1876, arrived in London on Tuesday, and has handed in his official report to the Lord President. It is understood that Mr. Owen's report speaks most favourably of the exhibition and the progress made in the buildings, and states that most important commercial results are likely to be attained from the concessions made to foreign, and especially to British, exhibitors. It seems to be generally agreed that very large numbers of people will visit the exhibition, more particularly from South America, and that there will be a keen competition between the American and English manufacturers to secure the South American trade.

PROFITABLE AMERICAN MINING ENTERPRISE.—The following is a recapitulation of the mines which have paid large sums to their owners without being assessed at all. The capital stock of the Imperial was \$50,000, which constituted its whole capital. It produced \$3,562,791, and paid \$1,067,500 in dividends. The Consolidated Virginia Mine has a nominal capital of \$10,800,000, but only \$411,200 was ever paid up, while \$100,000,000 bullion has been produced and \$35,000,000 of dividend have been paid. The California Mine today has a nominal capital of \$54,000,000, but it has never levied a dollar of assessment, and never will, although it has been explored, and are laid bare which has been estimated in value from \$400,000,000 to \$800,000,000. The Belcher Mine has a nominal capital of \$10,400,000, but the owners never paid up but \$600,600. That sum sufficed to turn out \$25,938,854 of bullion, and to give the shareholders \$14,248,000 more than they paid out. In the same way Crown Point, with a nominal capital of \$10,000,000, cost \$623,370 only in assessments, and has paid \$10,000,000 in dividends. The Eureka Gold Mine has paid \$2,004,000, and never cost a dollar.

EXPORTS OF STEAM-ENGINES.—The value of the steam-engines exported from the United Kingdom has remained stationary this year, and has, indeed, slightly declined. It amounted to May 31 this year to 1,090,717L, as compared with 1,253,484L in the corresponding period of 1874, and 1,106,431L in the corresponding period of 1873. In these totals May in each of the three years figured for 27,317L, 33,621L, and 245,325L respectively. The aggregate value of the steam-engines exported to May 31 this year to British India was 140,262L, as compared with 147,260L in the corresponding period of 1874, and 104,258L in the corresponding period of 1873; to Germany, to 129,675L, against 163,323L and 172,759L in the corresponding periods of 1874 and 1873; to Australia, to 94,716L, against 108,936L and 64,658L in the corresponding periods of 1874 and 1873; and to Russia, to 92,627L, against 75,217L and 73,805L in the corresponding periods of 1874 and 1873. Our exports of steam-engines have increased this year to Russia, France, and Spain; but decreased to Germany, Italy, Egypt, Brazil, British India, and Australia.

A WOOD CANAL.—In the western mining districts of the United States an unusual method of conveyance has been adopted. A wooden aqueduct, called a "flume," is constructed, of triangular shape, 6 ft. wide at the top, and some 3 ft. deep at the centre, requiring but slight water pressure, and following the natural inclinations or sinuosities of the district or valley along which timber has to be conveyed from the forest to the mine. At about every second mile a guardian is stationed to remove any obstruction which may occur, but although many of these flumes have been in operation for the last two or three years, some of them a length of 50 miles, blocks very seldom occur in the passage of timber along them. They afford means of transit for foresters, who seat themselves on the floating piles of wood. The consumption of timber throughout the United States is enormous. Mr. Watson, secretary of the British Legation at Washington, mentions in his report this year that in travelling through Nevada by railway he observed a snow-shed or tunnel, constructed entirely of timber, which it took 1 hour and 20 minutes to traverse, and which is said to be 29 miles in length.

SUB-WEA LDREN EXPLORATION.—Mr. Henry Willatt, the hon. sec., writes under date Netherfield, Battle, July 3:—

"I wrote you a description of our successful lining to 1138 ft. on June 20. Since then the boring downwards has been uninterrupted and unusually rapid, as will be seen when I announce that we shall reach 1400 ft. this evening. This has been done by a 3-in. crown, producing 2-in. core. We seem to be just leaving the enormous thickness of clay which, with slight interruptions of limestone, has characterised the whole work. By the middle of next week we shall attain 1500 ft., but the increasing cost at increasing depth will have quite exhausted our funds, including the Government grant of 100L per 100 ft. It cannot be too widely known that unless 2000 ft. be reached, the solution of the problem is as far off as ever. We have no wish to go to a new paleozoic rocks, as anticipated, may not lie at the estimated depth. Prof. Prestwich writes:—'I see no reason to alter the opinion I expressed three years ago.' Will no wealthy man interfere to finish the work which has occupied three long years, and which could now be completed in two months if we only had the money? I have already expended over 500L myself, besides the

whole of the time and correspondence necessary. I must be just to other claims, and although it appears to be imminent, failure will not convey any regrets, because I have done my best to complete the work entrusted to my charge."

ROYAL CORNWALL POLYTECHNIC SOCIETY.

The volume of Transactions for 1874, which has just been issued, is a particularly interesting one, and it is gratifying to find that the attendance at the annual exhibition was considerably larger than for some years past. The Royal Cornwall Polytechnic Society has done a large amount of good for the county, and is capable of doing much more, but, like all societies of this class, the incessant labour demanded from the working executive in order to keep up the spirit of the institution is so harassing that the workers are very apt to lose heart (especially as the work is usually performed gratuitously) when the necessary pecuniary support is not forthcoming. The financial condition of the institution has improved during the past two years, and the increased vitality which it has displayed should suffice to encourage subscribers to still greater efforts. There are, doubtless, many who withhold assistance altogether because they are unable to give a handsome subscription, but these should remember that it is the small subscriptions which do so much to make popular societies prosperous. In the case of the Royal Cornwall Polytechnic Society the subscribers of 5s. per annum represent more than one-fifth of the total subscriptions, but surely there must be more than 124 persons in Cornwall or connected with Cornwall capable of contributing so small an amount for so useful a purpose. It may be urged by some that no direct application has been made to them, but these should consider that canvassing would really consume a large proportion of the amount collected. Let all who are in a position to do so forward through the post a contribution, however small, to the secretary, either for the Royal Cornwall Polytechnic only, or for that and the Miners' Association of Cornwall and Devon in equal proportions (the latter being really an offshoot of the former), and it will be found in a very few years that the benefit accruing to the mining and other industries of the western counties will repay them, though indirectly, manifold.

The present volume of Transactions contains not only the President's address and reports of the judges on mechanics, naval architecture, fine arts, photography, natural history, school productions, needlework, and lace, but also abstracts of the lectures on the Antiquity of Cornish Mining by R. N. Worth; on Historical Illustrations or Scenes from English History, by F. E. Fox, B.A.; and on Dartmoor Antiquities compared with Cornish Legends, by C. Spence Bate, F.R.S. The "Exhibition Details" embrace admirable little descriptive notices of the Macarter condenser, the Darlington valveless borer, Abegg's electric firing sticks, King's magnetic ore separator, Preece's electric signals and telegraphic apparatus, Holmes's storm and danger signal light, Fletcher's gas muffle furnace for burning-in photo enamels, Rodda's contrivance for stamping ores by wind power, Maynard's paper with sections on the mines of the Illogan district, an account of the manufacture of Cornish sardines, &c. There is also a full meteorological report, accompanied by a beautifully engraved diagram showing the mean velocity and direction of the wind, and the mean atmospheric pressure and temperature for every day in the year 1874.

The volume is very carefully edited and well printed; indeed, it is in every way worthy of the Society.

REPORT FROM CORNWALL.

July 8.—Some curious illustrations of the variation in the prices given by the smelters during the past few days have come under our notice. When there is no official alteration of the standard every smelter appears, within certain limits, to do that which is right in his own eyes; and hence, while in some cases there was a drop quite equivalent to 2L, in others very nearly the old prices continued to be paid. We have not, however, heard of any such extraordinary case of differing judgment as that which once happened within our knowledge, when a parcel of tin for which one smelter made a low offer, which the seller had pluck enough to refuse, taking his tin away, it was sold to another just afterwards, the standard remaining unaltered, for 15L a ton more.

The clay-working district of the county has passed through a serious crisis in the shape of a strike. As already stated, the price of clay has considerably fallen off, especially in the commoner qualities—about 15 or 20 per cent.—and the stocks being large, the chief merchants determined on reducing the rate of wages from 2s. 6d. to 2s. 3d. a day, or 10 per cent. At a number of clayworks no reduction was made, but the men affected not only immediately went on strike, but in the first instance compelled their more fortunate brethren to turn out also, and then set about forming a Union. Mass meetings were held and violence was anticipated, a large body of police being concentrated in the neighbourhood, under the direction of Col. Gilbert, the chief constable. On Monday, about 600 men of the 2000 in the clay trade went in to work at the old scale, and the other men held various meetings, marching about in procession. In the afternoon they reached St. Austell, at the same time the principal clay merchants had met at the Globe Hotel, and it was arranged that they should be waited on by a deputation from the men in the Assembly Rooms adjoining, Mr. R. G. Lakes—who, as sole resident magistrate, has acted throughout this difficult time with admirable tact and singular discretion—attending as a kind of arbitrator between the two parties, or rather, perhaps, we should say as a mutual friend. Mr. Thomas Martin presided, and among the other merchants present were Messrs. Ed. Martin, J. Lovering, Brown, Higman, and Truscott. Mr. Thos. Martin explained to the men the reasons which had led to the notice of reduction. Not only was the clay trade exceedingly dull, while the prices were very much lower than they had been, but there were very large stocks at Buncorn and elsewhere. There was, in fact, no need to raise any more clay until next Christmas. In this state of affairs the clay merchants had considered what was the best means of lessening cost. Two courses presented themselves—the discharge of men, or the reduction of wages. They were reluctant to send any men off, and, therefore, proposed what they believed to be the better alternative. However, as it was not acceptable, they were ready to let bygones be bygones, and to return to the old scale of pay, hoping that matters would improve. The deputation expressed their entire satisfaction with the proposal, and Mr. Lakes congratulated both masters and men upon the happy settlement of the difficulty. He praised the men for the orderly way in which they had conducted themselves, and hoped that they would all go back to work as usual, and that nothing more would be heard of the dispute. The deputation then returned to the meeting in the cricket field, and announced the good news, which was received with great cheering. Thus ended the strike. It has cost the district a number of men, who have arranged to emigrate; but probably this is not an unmixed evil, inasmuch as it will have the desired effect of lessening production. A few words on the actual amount of wages earned. Though the rate is 2s. 6d. per day of 7½ hours of actual work, the average earnings of the men—certainly in the great majority of the works—are considerably more. This not merely arises from overtime, but from contract or piece work. Such work varies, but some firms invariably have not only the removal of the overburden, but the washing and the drying of the clay done by contract. Each day employed in shipping clay, be it long or short, is counted as a day and a half. Moreover, a number of works are associated with mining operations, and the men when employed on these are paid 3s. daily. The effect of this is, that instead of 15s. a week, the average earnings of the able-bodied men employed by a firm whose cost books we saw were 14. 1s. They worked for it, and they were not begrimed by it; but it is a point that should be understood. Nor is this at all exceptional. Boys and youths are paid according to their ability, and very commonly earn from 1s. 6d. to 2s. a day—less, of course, when they first come on. As compared with the agricultural labourers of the district, or the average miner, the clay worker and his family on the 2s. 6d. basis is not in a bad position. The proposed reduction of 10 per cent. would of course have made a material difference, and while the men would have lost, it is doubtful how far the merchants would have benefited. The fall in clay is from 15 to 20 per cent.; the 3d. a day would reduce the cost of getting the clay 6d. a ton, but in the keen competition which prevails in the trade, in the long run it is likely that the buyer, and not the merchant, would have had the advantage of this.

The Royal Cornwall Polytechnic Society's forty-second annual report has just been issued, and contains the usual amount of valuable matter concerning the details of the last exhibition, and other matters of interest in the county. Among the chief features I may mention the address of the President, Mr. A. P. Vivian, M.P.; the reports of the judges; the abstracts of lectures by Mr. R. N. Worth, on the "Antiquity of Cornish Mining;" Mr. F. E. Fox, F.R.G.S., on "Scenes from English History;" Mr. C. Spence Bate, F.R.S., on "Dartmoor Antiquities compared with Cornish Legends;" descriptions of the Macarter condenser and the Darlington valveless borer, both illustrated; and a highly important set of mineralogical notes by Mr. W. P. Dymond, F.M.S. The report appears for the first time under the editorship of Mr. R. N. Worth, F.G.S., the curator of the society.

The Stannaries Court has been so well abased that it is only fair to give what may be said on the other side. A recent writer thereon remarks that while the Court has been much abused by a certain class of persons, it is, in reality, the only protection of the resident

shareholders, who would otherwise be sued by the creditors of a company as soon as it drifted into difficulties, whilst outside shareholders would escape with impunity; but, once in the hands of the Vice-Warden and his staff, no efforts are spared to make every shareholder contribute his proportion of the debts. A rather remarkable instance of this kind occurred some little time since. A person who held largely in a certain mine, and who was greatly in arrears with his calls, thought proper to leave the country as soon as the mine with which he was connected found its way to the Court. After residing abroad for more than three years, he ventured to return to London, and by a curious incident this became known to the Registrar of the Court, who at once set to work and compelled the shareholder to pay several hundred pounds, from which a totally unexpected dividend was paid to the creditors. The delays in a final settlement are not always owing to the Court itself, but to the difficulty of collecting money in cases where the shareholders are scattered over the whole of the country, and against whom a mine owner would be almost powerless to act.

The following calculation has been made of the estimated monthly yield of tin in Cornwall and Devon. Illogan is credited with a quarter, and, in conjunction with St. Just, Camborne, and Redruth, with one-half of the total:—

St. Just	Tons 105	Illogan	Tons 309
Sancreed	2	Camborne	160
Galvah	21	Redruth	82
Morvah and Zennor	3	Gwennap	18½
Lelant	54½	Kea and Kenwyn	36½
Towednack	11	St. Agnes	45
Ludgvan	0	Warleggan	1
St. Hilary	8½	St. Austell district	58
Perranuthnoe	4	St. Enoder	11
St. Erth	1	Linkinhorne	34½
Crown	6	Calstock district	35½
Gwinear	8½	Devonshire mines	10
Breage and Germoe	17	Tin in halvans, &c.	70
St. Ives	14	Wendron	31
		Total	1187½

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

July 8.—The quarterly meetings of the Iron Trade are now commenced, and it is beginning to be seen what views manufacturers take of quotations. There undoubtedly is a disposition on the part of all makers to offer every reasonable inducement to customers to enter into transactions, and to bring about the desired improvement in business; but the difficulty is to make circumstances subservient to their wishes. It was expected that some alterations would be made in prices, but it was uncertain as to what extent the intention would be carried, and the uncertainty still exists in a measure. Certain reductions have been announced; but whether all the ironmasters will see their way to adopting the lowered rates fully remains to be seen. It is necessary that something should be done, for the trade continues in a very depressed state, and there is still but little prospect of improvement, unless prices can be so reduced as to make it worth buyers' while to give out orders, even though the iron may not be immediately wanted. Advices seem to point to a better prospective demand for railway iron on colonial account; but it is to be feared that there will not be a brisk trade any time this year.

Depression still continues to hang over the Tin-Plate Trade, there being no increase in the demand, and prices are still declining. The quarterly meeting of the trade was held at Gloucester, yesterday, and most of the makers of South Wales and Staffordshire were present. After due discussion the following resolution was passed:—"That it is satisfactory to find, as recommended at the last meeting, that a large reduction in the make of tin-plates has for some time been going on, but as prices, in face of such reduction, have continued to fall, it is desirable still further to extend the reduction in make." The reports submitted to the half-yearly meeting of the Workers' Union, held at Swansea, showed that the number of members had been greatly augmented, and that a better understanding had existed between masters and men since the lock-out last year.

In coals a large business is being done, and great strides have been made in the trade since the lock-out terminated. The clearances of steam coals to the foreign market is rather above the average, and compare well with those of corresponding periods of last and previous years.

The house coal trade still continues dull. There is an extensive output of all qualities. The men seem to be making every preparation for the formation of the Conciliation Board, and for the questions to be decided therewith. The names of the six representatives of the men were given in last week's report. Something like the following programme has been made out to set before the masters:—1. What shall be the selling price of coal in the market to effect a reduction in the price of labour, whether per ton or day-work?—2. If the house coal sell at (say) 12s. shipping, what shall be the cutting price per ton for the Mynddysilwyn seam, Monmouthshire, two coals, and one coal when it is in its natural stratum; also the No. 2 Rhondda Valley?—3. What shall be the difference in price per ton between through and coal and clean coal cutting, and filling into the tram near the face of the working place?—4. What advance per ton shall be paid to the collier for cutting coal where it is worked under its natural thickness, and how much per ton will the advance be?—5. What shall be the proportionate advance due to the cutting price of coal when coal shall advance 6d. per ton in shipping, or vice versa?—6. How is advance or reduction to affect day workmen, yard work, timbering, or any allowances, such as bad top, soft coal, thin coal, water in working places, and other natural disadvantages commonly found in collieries?—7. All roads, timbering, repairing falls of roof, having of bottom, to be in the care and expense of the owner's manager, overman, or general contractor. Secretary and treasurer to the six representatives have been elected, and a levy of 6d. per member on all miners in South Wales is to be made for the purpose of paying expenses, and it is urged that the money shall be collected not later than the end of the month.

Several furnaces have been lighted and set in readiness for re-lighting at the Race Works, Pontypool. The works have been idle for a considerable time, and advantage has been taken of the stoppage to make repairs and improvements.

JULY 10, 1875.

in draining the surface of the district being excessive. He emphatically denied that such was the case, and the other members of the board endorsed the contradiction.

Sinking operations have been commenced at the Hamstead and Perry Collieries, and the trial boring at Huntington is proceeding very satisfactorily.

To-day's quotations on the Birmingham Stock Exchange included the following:—Cannock and Huntington Colliery, 2½ prem.; Chilington Iron, 5½; Ivy House Colliery, 1 duc.; John Bagnall and Sons, 53; Patent Shaft and Axle, 4½ prem.; Sandwell Park Colliery, 29. The tone of the market is steady, considering the sensitive condition of the London Stock Exchange.

The North Staffordshire Iron and Coal Trade quarterly meeting was held at Hanley on Thursday—Mr. Wragge presiding. The finished iron trade was reported very flat in all parts of the district, and the business transacted at the meeting was almost *nil*. Pending the arbitration as to miners' wages, it was deemed impracticable to take any step towards fixing the course of prices.

COLLIERY MANAGERS HEAVILY FINED.—At the Willenhall Police Court, Mr. Joseph Davies, certificated manager of the Victoria Colliery, near Willenhall, was summoned for neglecting to fence the top of two shafts as required by the 14th general rule of the Mines Regulation Act, and also for not having posted up an abstract of the statute at the colliery. The Assistant Mines Inspector for South Staffordshire and East Worcestershire (Mr. Scott), proved the offence, adding that he had directed defendant's attention to both violations in December, 1873, but that up to last May and June neither the section nor the rule had been complied with. Defendant was fined 5d. and costs upon each charge.—Mr. Thomas Williamson, certificated colliery manager of the Norton and Cannock Colliery, was fined 10d. and costs for having insufficiently fenced a pit shaft, and 5d. and costs for not providing signalling apparatus. A mine employed in the eight feet seam of the Norton and Cannock Colliery was killed on the 3rd ult., by falling with a tub down the shaft, the cage not having been put out to receive him. It was shown that the eight feet opening was altogether unfenced, and that there was no signalling communication between the surface and the bottom of the shaft and intermediate working places.—The prosecutions were taken at the instance of Mr. J. P. Baker, the Mines Inspector for the district, upon the order of the Home Secretary.

TRADE OF THE TYNE AND WEAR.

July 7.—During the past week business has been much impeded by the usual holidays observed at Newcastle races, yet the shipments of coal in these rivers have been on a fair scale, and, as few coals were turned out of the pits, the stocks held have in some cases been reduced. The steam coal trade is, on the whole, pretty good, although the demand for best steam coal is not so brisk as could be wished. The gas coal trade is, of course, very quiet, but the prospect for its sale in the autumn is certainly promising, and collieries producing this kind of coal will command attention. Some of the works in Durham have been offered for sale, and they will, if parted with, bring good prices, as gas and coking coals especially are pretty certain to improve in value. The demand for steam and other coals for the Baltic and other foreign districts has been fair. At Blyth shipments have been on a comparatively small scale, and any coals required have been easily got from stocks held.

The Durham miners held their annual gala at Durham on Saturday, when there was a large attendance, about 30,000 men having mustered, and as there were 124 banners, many of them being not only large but fine works of art, the sight was very interesting. Yet the number attending this gathering fell far short of that present at former meetings, and especially the meetings of 1873 and 1874. There was a falling off on Saturday in point of number of not less than 15,000 men; this proves beyond a doubt that the men are becoming rather lukewarm in the cause of the Union. It is well known that it is a very costly affair, and the men find the contributions they are obliged to make very heavy, and as it is clear that the rates cannot be kept up it is likely that the Union will, in spite of the exertions made by the leaders, sooner or later, fall to pieces. Mr. Cowen, member for Newcastle, was expected to preside, but as he was unable to attend he wrote a long letter, which was read. The chair was occupied by Mr. Forman. Mr. Crawford was the first speaker, and he alluded to the reductions which had been made during the past year, and remarked that reductions were unpleasant, but that strikes were more so, and strongly advised them to avoid strikes if possible. The owners had asked for a reduction of 35 per cent., but they had escaped with reductions amounting to 14 per cent., and this he attributed to the power of the Union. They had, happily, so far avoided strikes, while in South Wales and other districts ruinous strikes had occurred. The speaker hoped that trade would improve, so as to enable them to maintain the present wages, but from the tone of his speech it is evident that he is not sanguine on this point. Mr. Macdonald had taken great interest in Trades Unions, and he dwelt on the many advantages that had been gained by the action of these Unions. He strongly urged the men to stand firm to the Union, and support and implicitly follow the leaders.

The Quarterly Meeting of the North of England Iron Trade was held at Middlesborough, on Wednesday, but the gathering was a very quiet one. There was only one exhibitor in the hall of the Exchange—Woodward's paving material, made from slag. It is stated that it can be successfully and cheaply made, and that it is very durable. There is one objection—that of carriage, as the material nearly doubles bricks in weight. The tone of the market was very good, but prices were quoted lower for pig-iron. No. 1, 47s.; No. 3, 51s. 6d.; No. 4, 47s. 4d., 49s. net cash. The inquiries on continental account have been rather more numerous of late. The returns of stocks are not yet out, but it is believed that there will be a sensible increase, although some of the furnaces have been blown out. The wage question is still exciting attention. There is very little doing in manufactured iron. The prices are nominally about the same, though some of the makers who have had little work on hand are, as usual, underselling. The price of rails is 7s. 6d. to 7s. 6s.; ordinary sections light, 7s. to 7s. 10s. Plates are rather less money, being on offer at 8s. 12s. 6d. Coke is weaker; prices of best brands, 18s.

REPORT FROM THE FOREST OF DEAN.

July 7.—The trade of the district, with some exceptions as to a few coal pits, is in a sluggish condition, and we fear that it is likely to remain so for some little time to come at least. The wages disputes have much injured the trade of the Forest; the strikes, and subsequent disputes and higgling between employers and employed have done much in scaring away would-be customers. The large profits realised by the proprietors in the times of high prices for coal were so sweet, that they have shown great reluctance to come down so as to fairly compete with other coal districts, the consequence being, that as merchants could secure supplies from other coal fields at more economic charges, they were under the necessity of meeting the public claims as to retain figures in that way. Coals from distant counties could be obtained at lower rates in this county and neighbourhood than could be obtained from the Forest pits. Such a ruling of prices, of course, checked our Forest trade. Of course we do not ignore the fact that depression has ruled for some time in the iron and other trades, but the causes pointed out as existing locally have been the more efficient influences at work to render the Forest coal trade much more sluggish than the same kind of business in other parts of the country. The proprietors, instead of lowering prices sufficiently to meet the situation, attempted to cut off percentages from the cost of labour, so as to minimise the loss on profits, but which attempts were opposed by the workmen. But the folly of undue high prices becoming apparent, the attempts to reduce wages were still pressed for by the proprietors, which course rendered it necessary for the men to meet the case decisively, and this they did by asking for an interview by deputation from the various pits by representative workmen, and this request the masters acceded to, and accordingly by arrangement met at the George Hotel, Littledean, last week. The points at issue were earnestly argued between the associated masters and a deputation of workmen, the result being a reduction of 5 per cent. on wages, leaving 15 per cent. advance upon the old rates of payment. But to put the matter in consecutive form, the rather long debate ended in the following decisions:—1st. That the percentage on wages be 15 all round, instead of the present rate—2nd. That no collier be required to cut more than 21 cwt. to the ton, except at Parkend and the Fancy—3rd. That best coal should be reduced to 12s. per ton. 4th. That colliers' house coal shall be 8s. 4d. per ton all round, except at Parkend and the Fancy—5th. That on best coal being advanced at any time 1s. per ton, wages shall be advanced to the men 5 per cent. 6th. That these resolutions shall take effect on Monday, July 5 (Monday last). These terms having been severally agreed to by the contracting parties, copies of the same were signed by the chairman of the Masters' Association and the miners' agent, for the purpose of proof and reference by the respective federations. The masters were represented on the occasion by Messrs. A. Goold (chairman), T. Goold, E. Crawshay, T. B. Brain, W. Trotter, T. Sully, A. T. Thomas, S. J. Thomas, B. Wintle, and D. Proson. The deputation representing the workmen, included T. Mountjoy, miners' agent, and men representing the following pits:—Lambmoor, Trafalgar, Biles, and Crump Meadow; The Duck, Crabtree Hill (Foxe's Bridge), Filbeck, Parkend, Tufton, and East Slade Collieries.

The basis of the sliding scale, although low, will be found to give a considerable advance on the old rates of wages, taking into account the machine on the pit's bank, which prevents "chiseling" to the extent of 25 per cent., as compared with the old loose system, according to a statement made by Mr. Goold on one occasion; and further, the men retain the eight-hour system. These points gained clearly show the effects of combined efforts to reduce the drudgery of hard toil; but in illustration of the old adage that "it is not all gold that glitters," the extra cost of living since the wage agitation commenced, many affirm, more than consumes the extra pay. We think, however, as observers of men and things, as time rolls onward, that the eight-hour system remains as the net gain to the toilers, for surely men were not designed to be mere beasts of burden, or even of serfdom. Equal freedom should be the lot of all, whether of the moneyed or working classes, and the day that shall see a good day's wage for a good day's work, and capital at the same time receiving good and liberal returns for investment and adventure, will be a proud and happy one for all classes. We are compelled, however, to say that this regulation of wages now come into force does not well satisfy many of the workers, as they believe it will still be extremely difficult to properly feed and clothe their families and pay their way. Under these circumstances, therefore, numbers are contemplating leaving their native country for one or other of our colonies, and others are thinking of "Yankedom." But with respect to British colonies we can speak positively, since we have the means of knowing that parties are daily applying for passages.

We regret exceedingly that our reports too frequently are occupied about wages disputes; but as these contentions have so much "blocked the way," as faithful chroniclers of passing events affecting Forest trade we had no choice but to take up these matters for ventilation, discussion, and review. But as a sliding scale has been adopted, with the hope that the masters will try well to find more regular work for the men, we may venture to hope for more contentment, as well as im-

provement in business. The tin-plate works at Lydney and Lydbrook are reported as fairly in action, but Cinderford forge is far from satisfactorily employed. All the men who had notice at the furnaces did not leave; but the notice, where it is given, practically operate by dismissal, creating uneasiness and uncertainty, and the fruit is obvious by notices and departures on the part of various men. The Forest contains great mineral riches; but unless more steadiness characterises business and labour, large prosperity cannot be looked for. But with more capital invested, and a better understanding created between employers and their workmen—one more solid and enduring we mean—much commercial gain could yet be reaped in Dean Forest by enterprising men of business.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

July 8.—Mining operations in the lead districts of Derbyshire are of a steady character, and there has been of late no material addition to the average production. Very few new works have been opened out, and the county does not appear to be a favourite one with capitalists and speculators, although there is certainly no reason why investments in lead mines in it should not turn out profitable. It has been very different with respect to coal mining, for even now there would be no difficulty in finding customers for really genuine collieries. The South Yorkshire Miners' Association has bought the Shirland Colliery, near Alfreton, for 70,000*l.*, and it is to be worked principally by and for the benefit of the members. A deposit of 10,000*t.* has been made, and the purchase is to be completed before Sept. 30, but the colliery is to be treated as carried on from July 1 to the benefit and risk of the purchasers. A good deal of interest is attached to this undertaking, and which will be looked upon by colliery owners with favour, seeing that the men from practical experience will be able to ascertain the profits made in the coal trade, of which they have an extravagant idea at the present time. The demand for house coal is just now so quiet that at not a few collieries the men are not working more than four days in the week. To London less is being sent than for some time past, and there has been a marked falling off in the tonnage sent from Clay Cross as well as from other places. As might be expected, prices have come down, but not sufficiently so as to induce merchants or consumers to take in stocks. Steam coal is much better than it has been, but a good deal of what is raised is along with the softs or households. The iron trade of Derbyshire keeps up very well both as regards pig and the manufactured material. The foundries have been working very well, and a fair business done in mill work.

The Sheffield Traders are in much the same state as noticed last week. There is, however, every appearance of an improvement in the demand for Bessemer rails, as well as forgings. Heavy armour plates keep the mills of the two great companies engaged on them well going. Cast steel is also in better request, and a little more is being done on American account. Most of the cutlery branches are quiet, shipments being very moderate. The foundries, both in the town and the district, are favourably off for orders, and in some instances there is considerable activity. Throughout South Yorkshire the Coal Trade is particularly dull as regards households, and many of the miners are on short time. Steam coal, however, is in much better demand, although shipments from Grimsby so far have not been so heavy as might be expected for the month of July. There has been a marked falling off in the tonnage of Silkstone and other coal sent over the Great Northern to London for some weeks past. Only a moderate business is being done in smudge to Lancashire and Cheshire, although it can be bought at something like 1s. 6d. per ton at the collieries.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week the market has continued very idle. In shares of iron and coal concerns prices generally lower; the following have, however, each improved to the extent noted:—Marbella, 4s.; Monckland ordinary, 4s.; and Omon and Cleland, 4s. The reductions comprise—½ on Benhar (all paid); 1s. 6d. Benhar new (5*l.* paid); ½ Bolckow, Vaughan, A; ½ Ebbw Vale; 2s. Glasgow Port Washington (8*l.* paid); ½ Glasgow Port Washington (all paid); ½ Lochore and Capledrae; and ½ Nant-y-Glo and Blaina preferred. In shares of copper concerns the tendency seems also downwards, but only from want of business, as many shares would rise 50 to 100 per cent. if the market was a little brisker on their intrinsic merits. Cape has declined 1*s.* after allowing for the dividend; Rio Tinto, ½; Russian, ½; Tharsis (all paid), ½; and Tharsis (new) also ½. Huntingtons, to which I drew attention last week, have improved ½, being the only favourable movement in the market, beyond a slight firmness in Yorke Peninsula, owing to the favourable advices from the mines. In shares of gold and silver mines Flagstaff is ½, and Last Chance ½, each lower. Javali is a trifle better, and Emmas are very steady. In shares of oil companies there has not been a single transaction to record. Miscellaneous companies' shares are also little dealt in; an improvement of ½ may, however, be noted in Scottish Wagons (all paid). There have been some symptoms of a revival in speculation in guano companies' shares, but the movement has not yet progressed sufficiently to call for comment. At a time like the present when the markets are very idle at low prices, and public opinion divided as to whether prices have seen their lowest or not, it would be as well for investors to bear in mind that any fair amount of shares coming upon the market is likely to depress prices, for the simple reason that the demand is extremely limited, and that, therefore, the low level of prices, which may in any particular case be reached, does not necessarily arise from any change in the intrinsic value of the shares affected; on the other hand, in fact, in some instances the value of the shares may even be intrinsically better. What I desire to point out, and will at once be perceived, is that those who can give the necessary attention to examine carefully into the position and prospects of some particular variety of shares at this time make a purchase, and continue buying as the market offers inducement, are certain to profit thereby, as the market will, sooner or later, return to such a state as will enable such purchases to be satisfactorily disposed of to the numerous investors who appear whenever things begin to wear a brighter aspect. A detailed list of the several day's business follows:—

ON THURSDAY last a moderate business was done. Benhar, new (5*l.* paid) shares, 10s. to 10*s.* Canadian Copper Pyrites opened lower at 38s. 6d., but recovered to 40s., closing 40s. to 41s. Cape Copper remain at 35½ to 36½; the annual report to be submitted to the general meeting on July 7 shows the profit for the year 1874 was 92,000*l.* 8s. 9d., out of which 83,000*l.* was distributed in four quarterly dividends of 1*s.* per share, 2500*t.* has been carried to landed estates and buildings sinking fund, and 7102*s.* 5*l.* to the railway and jetty sinking fund. Ebbw Vale done at 17½, closing 17½ to 17¾. Flagstaff lower at 2½ to 3. Glasgow Port Washington (8*l.* paid) done at 33s., closing 33s. to 35s.; all paid shares lower at 42s., closing 42s. to 42s. 6d. Monckland, ordinary, at 5s. 6d. Omon and Cleland higher at 4s. to 5s. Russian Copper lower at 2½ to 3½. Shotts Iron (50*l.* paid) offered at 22*s.* 6*l.* Tharsis done at 24½, closing 24½ to 24¾; new shares easier at 16½ to 16¾.

ON FRIDAY the business done was again moderate; market firm. Benhar (all paid) done at 10½, closing 10½ to 10¾; new (5*l.* paid) shares done at 10½. Canadian Copper Pyrites remain at 39s. 6d., closing 39s. 6d. to 40s. Cape Copper, now quoted ex div., are lower at 33 to 35. Colorado Terrible, 2 to 2½; the annual report for the general meeting on July 12 shows a net realised profit on the company's operations for the year ended March 31 last of 7807*l.* 10s. 6*l.*, exclusive of ore of all grades on hand, the value of which is estimated at 9317*l.* With reference to the portion of this company's workings claimed by Mr. W. A. Hamill, and which is at present the subject of law proceedings, it is noted that injunction has been granted against Mr. Hamill working on the disputed portion, which the company's engineers will prove beyond question they are legally entitled to. Emma, 38s. to 39s. Glasgow Caradon, original, done at 27s. Glasgow Port Washington (8*l.* paid) done at 33s., all paid shares offered at 33s. Gunnislake (Clitters), 1½ to 1¾. Huntingdon done at 17½, closing 17½ to 17¾. Last Chance 1½, each lower. Rio Tinto, now quoted ex div., is 7½ to 8. Tharsis done at 24½, closing 24½ to 24¾. Scottish Wagons (all paid) done at 12½, being an advance of ½.

ON SATURDAY the business done was very small. Bolckow, Vaughan A, shares, 50 to 51. Dunsley Wheal Phoenix, 1½ to 3½. Ebbw Vale, 17 to 17¾. Gunnislake (Clitters), 1½ to 1¾. Javali, 3s. to 3½. Huntingdon firm, opened at 41s., but improved to 42s. 6d., closing 42s. 6d. to 43s. Marbella, 31s. to 32s. Omon and Cleland again higher at 2½ to 2¾. Richmond done at 18½ to 19s. Rio Tinto, now quoted ex div., is 7½ to 8. Tharsis done at 24½, closing 24½ to 24¾. Scottish Wagons (all paid) done at 12½, being an advance of ½.

ON SUNDAY the business done was very small. Bolckow, Vaughan A shares done at 50½ to 51. Dunsley Wheal Phoenix, 1½ to 3½. Ebbw Vale, 17 to 17¾. Gunnislake (Clitters), 1½ to 1¾. Javali, 3s. to 3½. Huntingdon firm, opened at 41s., but improved to 42s. 6d., closing 42s. 6d. to 43s. The I. X. L. Gold and Silver Mining Company (Limited), Nevada, is at present trying to raise 30,000*l.* in 12 per cent. debentures of 20*s.* each, redemable in two years at par, which is the issue price; interest to be paid quarterly. A special report is also issued by the company's manager at the mines, which is indeed encouraging. Last Chance, 1½ to 1¾. Lochore and Capledrae, 5 to 5½. Marbella, 31s. 6d. to 32s. Monckland ordinary done from 52s. 6d. to 55s., closing 54s. 6d. to 55s. Omon and Cleland, 4s. to 5s. Richmond, 14½ to 15. Scottish Australian, 1½ to 1½. Drakes Walls done at 50½ to 51. Conglog Slate or Slabs, offered at 10½. Drake Walls done at 43s. to 44s. Lochore and Capledrae, 5 to 5½. Marbella done at 28s. 6d., closing 28s. 6d. to 29s. 6d. Monckland ordinary done from 52s. to 52s. 6d., closing 53s. to 54s. Omon and Cleland, 4s. to 5s. Richmond done at 14½, closing 14½ to 15. Tharsis done from 24½ to 24¾, closing about 24½ to 24¾.

ON MONDAY the market was quiet. Bolckow, Vaughan A shares done at 50½ to 51. Court Grange Lead, ½ to 1. Canadian Copper Pyrites, 39s. to 39s. 6d. Glasgow Caradon original done at 26s. 6d., closing 26s. to 27s. Huntingdon done at 42s., closing 42s. 6d. to 43s. The I. X. L. Gold and Silver Mining Company (Limited), Nevada, is at present trying to raise 30,000*l.* in 12 per cent. debentures of 20*s.* each, redemable in two years at par, which is the issue price; interest to be paid quarterly. A special report is also issued by the company's manager at the mines, which is indeed encouraging. Last Chance, 1½ to 1¾. Lochore and Capledrae, 5 to 5½. Marbella, 31s. 6d. to 32s. Monckland ordinary done from 52s. 6d. to 55s., closing 54s. 6d. to 55s. Omon and Cleland, 4s. to 5s. Richmond, 14½ to 15. Scottish Australian, 1½ to 1½. Drakes Walls done at 50½ to 51. Conglog Slate or Slabs, offered at 10½. Drake Walls done at 43s. to 44s. Lochore and Capledrae, 5 to 5½. Marbella done at 28s. 6d., closing 28s. 6d. to 29s. 6d. Monckland ordinary done from 52s. to 52s. 6d., closing 53s. to 54s. Omon and Cleland, 4s. to 5s. Richmond done at 14½, closing 14½ to 15. Tharsis done from 24½ to 24¾, closing about 24½ to 24¾.

ON TUESDAY the market was quiet. Bolckow, Vaughan A shares done at 50½ to 51. Court Grange Lead, ½ to 1. Canadian Copper Pyrites, 39s. to 39s. 6d. Glasgow Caradon original done at 26s. 6d., closing 26s. to 27s. Huntingdon done at 42s., closing 42s. 6d. to 43s. The I. X. L. Gold and Silver Mining Company (Limited), Nevada, is at present trying to raise 30,000*l.* in 12 per cent. debentures of 20*s.* each, redemable in two years at par, which is the issue price; interest to be paid quarterly. A special report is also issued by the company's manager at the mines, which is indeed encouraging. Last Chance, 1½ to 1¾. Lochore and Capledrae, 5 to 5½. Marbella, 31s. 6d. to 32s. Monckland ordinary done from 52s. 6d. to 55s., closing 54s. 6d. to 55s. Omon and Cleland, 4s. to 5s. Richmond, 14½ to 15. Scottish Australian, 1½ to 1½. Drakes Walls done at 50½ to 51. Conglog Slate or Slabs, offered at 10½. Drake

THE MINING JOURNAL.

FLINTSHIRE.

SALE OF THE LEESWOOD HILL COLLIERY, at PONTBLYDDYN, near MOLD, and close to the Coed Talon Branch of the Chester and Mold Railway.

MR. THOMAS DEAN begs to announce that he has been instructed by the Mortgagor in possession to SELL, BY AUCTION, at the Black Lion Hotel, in the town of Mold, on Monday, the 2nd day of August, 1875, at Three for Four o'clock in the afternoon prompt, in One Lot, subject to conditions to be then produced, the Lessee's Interest in all that MINERAL PROPERTY known as the

LEESWOOD HILL COLLIERY.

Comprising the seams of coal, cannel coal, shale, and ironstone under 43A. 2R. 31P. of land, or thereabouts, situate in the parish of Leeswood, and held under three several leases, for terms of which as to 37 A. 1 R. 24 P. about 19 years are unexpired, and as to the remaining 6 A. 0 R. 37 P. about five years are unexpired (but the lease is renewable), at minimum dead rents, amounting together to £145 per annum, re-liable from footage rents and royalties, and comprising also the lease's interest in the Machine House, Office, Cottage, and Premises adjoining the North Wales Refinery, and held under a lease for a term, of which about 19 years are unexpired, at a rent of £18 per annum; together with the whole of the valuable ENGINES, PLANT, and MACHINERY belonging to the colliery, and the siding and tramways connecting it with the Coed Talon Branch of the Chester and Mold Railway, a schedule of which will be produced at the time of sale.

This colliery is most advantageously situated, both for land and railway sales. A considerable sum has been expended in proving and opening out the mines. Seams of coal and Cannel have been proved and worked, and valuable beds of very superior clay are known to exist on the estate. A moderate amount of capital only is required to develop the property.

For further particulars apply to Messrs. KELLY, KEENE, and ROPER, Solicitors, Mold, or to the Auctioneer, Mold.

SLATE QUARRY FOR SALE, BY AUCTION, on the premises, at Glen Aulin, near Ramsey, Isle of Man, on Thursday, the 29th July, 1875, at noon. The INTEREST on the remaining term of the LEASE from the Crown (about eight years), subject to the covenants therein. Also, all the MACHINERY, IMPLEMENTS, and STOCK of SLATES and SLABS, &c.

Orders to view the premises, and any further particulars required by intending purchasers, can be had on application to A. W. CHALMERS, Esq., 5, Fenwick-street, Liverpool; or to Mr. JOHN S. JACKSON, 8, Windsor-terrace, Ramsey.

CARDIGANSHIRE.

THE ESGAIR-HIR SILVER-LEAD MINE TO BE SOLD BY TENDER. TENDERS are invited for the PURCHASE of the SETT,

LEASES, PLANT, and MACHINERY of a very valuable MINING PROPERTY, known as the

ESGAI'R-HIR MINE.

Situated in a celebrated Mineral District, in the county of Cardigan, near the important town of Aberystwith, the thriving village of Talyllyn, and about seven miles from the Llanfihangel Station on the Cambrian Railway.

The sett is very extensive, and the lodes are large, and have yielded many thousands of tons of ore at and above the 20 fm. level, which was the deepest point worked on before the present company became possessed of the property. About £2000 worth of ore has been taken from a short driving west; and in order to further develop the property the main shaft has been sunk 30 fms. below the deepest point of the old workings, and in the opinion of competent mining engineers who have inspected the property, all that remains to be done is to make it a great and lasting property is to explore the lodes.

The Mine is held under a lease from Sir Pryse Prysce, Bart., of Gogerddan, of which eighteen years are unexpired, at a royalty of 1-16th for the first four years, and 1-16th for the remaining fourteen years, and is plentifully supplied with water.

Tenders to be forwarded on or before the 31st day of July next to Mr. GEORGE JOACHIM, of 28, Cornhill, London, but the vendors do not bind themselves to accept the highest or any tender.

Further particulars, and a copy of the inventory of the machinery and plant, and orders to inspect the property, may be obtained of Mr. F. WILLIAMS, Treddol, Glandovey, R.S.O.; or of Messrs. HUGH HUGHES and SON, Solicitors, Aberystwith.

ARSENICAL MUNDIC.

TENDERS will be RECEIVED by the Committee of the PRINCE OF WALES MINE, at the office of the company, St. Michael's House, Cornhill, London, on Saturday, the 24th instant, for the PURCHASE of about EIGHTY TONS of ARSENICAL MUNDIC, now ready FOR SALE at the Mine, near Callington.

Samples and particulars may be obtained on application to Capt. GIFFARD, at the mine.

The committee do not bind themselves to accept the highest or any tender.

Dated 9th July, 1875.

TALAROGOCH LEAD MINE.

TO BE SOLD, BY PUBLIC TENDER, the celebrated MINE known as the TALAROGOCH MINE, situate near RHYL, NORTH WALES, which has been worked for a number of years with great success. Over 20,580 tons of lead ore and 13,000 tons of blende were raised and sold during the period of ten years ending December, 1874.

The mine is in full operation, and in good working order, the average monthly returns for the present year being 117 tons of lead ore and 166 tons of blende. Both on surface and underground the property is fitted with machinery in proportion to its magnitude, and it is confidently believed that good management and further development only are required to return as good or better dividends than heretofore.

Sealed tenders to be delivered at the offices of Messrs. WALKER and SMITH, Solicitors, Chester, before Eleven A.M. on Monday, the 26th day of July, 1875, and to be there opened at Twelve at noon on that day.

Order to inspect, with particulars and conditions, and forms of tender, can be obtained at the mine; or to J. R. JONES, Esq., Pystill, near Holywell; MR. JOHN S. BLEASE, 15, Lord-street, Liverpool; HENRY E. TAYLOR, Esq., Mining Engineer, Chester; or Messrs. WALKER and SMITH, Solicitors, Chester.

IN VOLUNTARY LIQUIDATION UNDER THE COMPANIES ACT, 1862. THE NEW LLANGYNOG LEAD MINING COMPANY (LIMITED).

TO BE SOLD, BY PRIVATE TREATY, ALL the BENEFICIAL INTEREST of the New Langynog Lead Mining Company (Limited) in the LLANGYNOG LEAD MINES, comprising all the valuable, productive, and extensive mines, veins, beds of lead, ores of lead, and other metals and minerals known collectively as the Langynog Lead Mines, and in the reservoir, water-supply rights, easements, and interests thereto belonging, situate in the several parishes of Langynog, Llanrhaidr-yn-Mochnant, Hirnant, and Pennant, in the county of Montgomery; and also the WHOLE of the movable PLANT and MACHINERY of the said company.

The Langynog Lead Mines have been a highly productive and dividend-paying property.

The mines, machinery, and plant are in working order, and considerable quantities of ore are now being raised.

The works may be inspected at any time upon application to the Manager at the mine. The leases and agreements may be inspected at the offices of Messrs. LONGUEVILLE, JONES, and WILLIAMS.

All further information may be obtained, and maps of the property inspected, on application to Messrs. GEO. HASWELL and SONS, 84, Foregate-street, Chester; HENRY DENNIS, Esq., Mining Engineer, Hafod-y-Bwch, Ruabon; or to Messrs. LONGUEVILLE, JONES, and WILLIAMS, Solicitors, Oswestry.

TO CAPITALISTS OR PROMOTERS DESIRING TO MAKE MONEY.

TO BE SOLD, a COLLIERY ROYALTY in NORTH WALES, close to rail or shipping port; several shafts partially sunk; coal fully proved of FOUR SEAMS of good HOUSE and STEAM COALS, in an area of upwards of 400 acres of surface. It adjoins the West Mostyn Coal Field, just successfully launched, where under seams (including Cannel) have been proved in addition to the above; so that eminent engineers state that the available coal in this royalty may be 85 feet thick.

Possessor will arrange to sell the entire to an individual or company for what it has cost him, dividing all profit made above, which, even in a normal state of the coal trade, must be large. Certain and safe surveys by eminent Staffordshire and Welsh engineers have already been made.

Address, "Nil Desperandum," care of Mr. Watson, 15, Fenwick-street, Liverpool.

RARE OPPORTUNITY.

TO BE SOLD, a SLATE QUARRY, with an inexhaustible supply of SLATE ROCK, of light blue-colour; long lease and favourable terms. A genuine concern, and will bear the strictest inspection.

Address, "M. 274," care of H. Greenwood, No. 2, York-street, Covent Garden, London, W.C.

TO BE SOLD, a valuable FREEHOLD MINING PROPERTY in CARMARTHENSHIRE. The estate contains SEVERAL FARMS, comprising in all about FOUR HUNDRED ACRES, the whole under-run with veins of the best anthracite coal, iron ore, fire-clay, &c., all of which have been proved, and are now being worked on adjoining properties. A portion only of the freehold surface will be sold.

For particulars, apply to Mr. W. W. GWYTHNER, Surveyor, 12, Beaufort Buildings, Strand, W.C.

CHINA CLAY AND TIN, COPPER, AND IRON ORES IN CORNWALL.

THE LESSEE'S INTEREST in certain VALUABLE CHINA CLAY AND TIN WORKS, in full operation, and also in certain CHINA CLAY AND TIN, COPPER, AND IRON ORES SETTS in CORNWALL TO BE DISPOSED OF.

Full particulars can be obtained on application to Mr. S. N. SCOTT, China Clay Merchant, St. Austell.

STEAM ENGINES, &c., FOR SALE: ONE STRONG 70 in. cylinder, and FOUR BOILERS, about 45 tons. ONE 26 in. ROTARY, TWO BOILERS, large fly-wheel, and two boilers, 20 tons, with or without 30 head of stamps.

ONE 26 in. WINDING ENGINE, modern construction, with expansive gear. ONE 22 in. WHIRL ENGINE, with powerful steam capstan, capable of lifting 80 tons. ONE 16 in. CAPSTAN ROPE.

Large quantity of PUMPS, from 20 in. downwards. Apply to Mr. STEPHEN BARKER, 16, Oozells street, North, Birmingham; or to Mr. H. WILLIAMS, C.E., Cudliffe House, St. Austell.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the MID-CORNWALL MINES (LIMITED).—TO BE SOLD, under the direction of the Registrar of the said Court, by PUBLIC AUCTION, on Monday, the 26th day of July, at Eleven o'clock in the forenoon precisely, at the CORNUBIA TIN MINE, in the parish of Roche, within the said Stannaries, subject to such conditions and in such lot or lots as shall be the case and there stated, all that the interest of the mining company known as the said Mid-Cornwall Mines (Limited) in the several SETTS or LEASES under which the mining operations of the said company have been carried on, together with the whole of the valuable and extensive

PLANT, MACHINERY, MATERIALS, AND EFFECTS, including all such ores or surface as shall be specified by the auctioneer at the time of sale, belong to the said company, and comprising as follows:—

AT THE CORNUBIA TIN MINE.—50-in. cylinder beam engine, 9-ft. stroke in cylinder by 8 ft. in. shaft, two boilers about 23 tons, including new perpendicular piped engine, together with first piece of rod and main caps and balance bob, shears, eight arm capstan, 17 fms. 12 in. capstan rope, second, third, and fourth pieces of main rod, iron balance rod, whim cage, 23 1/4 in. pumps, 21 1/3 in. ditto, several other pumps, stamps wheel, 30 ft. in diameter, and other water-wheels, and a large quantity of timber and iron.

AT THE MAGNETIC IRON MINE.—10-in. vertical cylinder engine, 21 in. stroke, with fly-wheel; two balance-bobs, connecting rods, crown wheel, spur wheel, also 6 tons of boiler, with furniture; weigh bridge and house, to weigh 10 tons; pumps, and sundry timber and iron.

AT THE LANJEW IRON MINE.—14 in. horizontal 4 ft. stroke double acting condensing engine, with 11-ft. fly-wheel, wrought-iron arms, air pump, feed plunger, two balance-bobs, connecting rods, 9-ton boiler, engine and boiler-house, pumps, and a quantity of iron ore.

AT THE BURNLEY-HOUSE MINE.—7-in. cylinder portable threshing machine, with wheels, also crown wheel, balance-bobs and connection rods, house lift, H-pipe, pumps, flat-rods, main rods, plunger-lift, shaft tackle, 40-ft. shears, and a large quantity of iron ore.

AT THE HALLEW IRON MINE.—48-in. double-acting cylinder steam-engine, 8 ft. stroke, with fly-wheel, shafts, travelling bob, horizontal rod, two balance-bobs, two axles for 12 heads each, lifters, frames, stands and boiler, 40 ft. long, 6 ft. 6 in. case, by 4 ft. 3 in. tube, with furniture, pumps, and a quantity of iron and steel, and miners' and blacksmiths' tools.

AT THE GREAT TIN MINE.—36 ft. long, 3 ft. 8 in. tube, 6 ft. case, tube case, new axle for 12 heads, ditto for eight heads, 24 heads ditto, double crab winch, single ditto, blocks, chains of various sizes, pumps, balance-bobs, and a quantity of stores.

MOLINNES MOOR MINE.—The interest of the said company in the sett or lease of this mine will alone be offered for sale, there being no materials thereon.

To inspect the above apply to Capt. DAVID COCK, at Roche aforesaid; and for further particulars to Mr. JOHN HENRY HAMLEY, the official liquidator of the said mines, at the Stannaries Court Office, in Truro.

THOMAS CHORLTON, 32, Bannister-street, Manchester. (Solicitor for the said Official Liquidator).

R. M. PAUL, Truro. (Agent of the said Solicitor).

Dated Stannaries Court Office, Truro, this 8th day of July, 1875.

IN LIQUIDATION.

DEER PARK MINE, NEAR CALLINGTON, CORNWALL.

MESSRS. MAY, MURCH, AND JACKSON are favoured with instructions from the Liquidators TO SELL, BY AUCTION, in One Lot, as a going concern, on Tuesday, July 20, 1875, at Three o'clock in the afternoon, at Golding's Hotel, Callington, Cornwall, on such conditions as will be produced, the

BEER PARK MINE,

in the parish of STOKECLIMSLAND, near CALLINGTON, together with the

VALUABLE MACHINERY and APPLIANCES thereon.

The PLANT includes a 40 in. cylinder PUMPING ENGINE, with a 40 fm. 10 in. plunger lift, 18 fm. 8 in. lift, main rod, balance bob, horse whim, 50 fm. wire rope, waterwheel (56 ft. diameter, 3 ft. breast, with stamps axle and 24 stamp heads attached), two bobbins, burning house, dressing floors, tools, carpenters' and smiths' shops, offices, and the usual requirements of a mine.

The whole of the plant and machinery is as good as new, and in first-class working condition. The shaft is 12 ft. by 7 ft., divided and cased throughout. There are eight well-defined ledges on the sett, neither of which have been worked below adit. To capitalists, or for the purpose of forming a joint stock company, the above offers exceptional advantages.

If not sold in one lot the whole will be offered in convenient lots, of which due notice will be given.

Captain J. BUCKNELL will attend at the mine every Monday and Thursday prior to the sale to show the property; and for further particulars apply to the Auctioneers; to R. EASTON JAMES and Co., 53, Moorgate-street, London, E. T. R. WILDE, Esq., 27, Moorgate-street, London; Public Accountants; or to Messrs. BELLAMY, STRONG, and EDGELOW, Solicitors, 54½, Bishopsgate-street, London. Dated Plymouth and Liskeard, June 28th, 1875.

THE NEW DALE MINE (LIMITED).

IN LIQUIDATION.

IMPORTANT SALE OF VALUABLE MACHINERY AND MINING PLANT, AT WARSLAW, NEAR LEEK, STAFFORDSHIRE.

MESSRS. FERGYSYON AND SON have received peremptory instructions from the Liquidators to SELL, BY AUCTION, at the New Dale Mine, Warlow, near Leek, on Thursday, July 22, 1875, at Twelve o'clock, the WHOLE of the APPROPRIATE and COSTLY

MACHINERY AND MINING PLANT,

COMPRISED

40 in. cylinder ENGINE, 9 ft. stroke in cylinder, and 7 ft. in shaft.

TWO Cornish TUBULAR BOILERS, about 9 tons weight each.

19 in. diameter cylinder WINDING ENGINE, 4 ft. stroke, equal beam, with Cornish TUBULAR BOILER, about 7 tons.

2 1/2 in. wide wire ropes, 300 yards each, and all head gear, complete; steam capstan, 12 in. diameter cylinder, 2 ft. 6 in. stroke, with driving gear and drum, complete, with a 1 1/2 in. diameter steel wire round rope, 300 yards long; 58 ft. high shears, with pulleys, complete; 100 yards of main rod, 14 in. square, with strap plates, complete; 49 1/2 in. diameter 9 ft. pump; 4 1/4 in. diameter 11 ft. working barrels; 4 1/4 in. diameter 9 ft. windbores; 4 1/4 in. diameter 4 ft. door pieces; 2 1/4 in. diameter H.P. pieces; 70 yards of various sized pumps, for 6 in. diameter plunger; 10 yards of 5 in. diameter pitworts (the whole of the pitworts is complete, with valves, buckets, and every other requisite); 300 yards of wrought iron rails: smiths' bellows, anvils, and smiths' tools; crushing mill, with three circular sleeves; square jiggling sleeves, with hatches; spades; 8 tons of old iron (about); railway; 2 wagons; wire rope and drum; wheelbarrows; several casks of barrow cement.

The machinery is in first-class working order, and the materials of the best possible description.

For particulars and all other information, apply to Mr. WM. WARD, Crosby House, London, E.C., the Liquidator; or of the Auctioneers, Leek.

To view, apply to Captain JAMES BRAY, the Agent on the Mine, Warlow, near Leek.

BY ORDER OF THE LIQUIDATOR.

IN THE MATTER OF THE FALCON CLIFF MINING COMPANY (LIMITED).

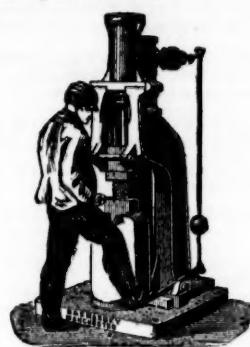
M. R. THOMAS WYLIE WILL SELL, BY AUCTION, on

B. & S. MASSEY, OPENSHAW, MANCHESTER.

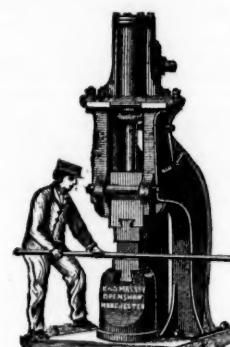
PRIZE MEDALS AWARDED:—Paris, 1867

Havre, 1868 Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873.

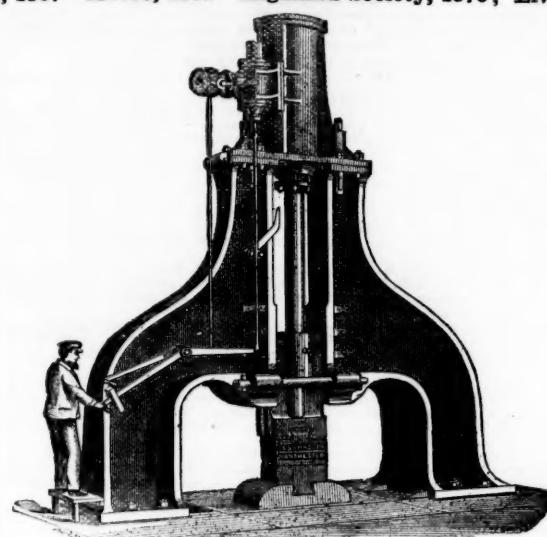
Patentees and Makers of Double and Single-acting STEAM HAMMERS of all sizes, from $\frac{1}{2}$ cwt. to 20 tons, with self-acting or hand motions, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.



Small Hammer with Foot Motion.



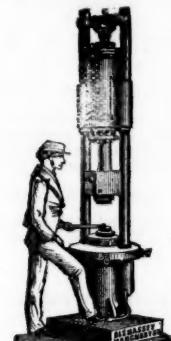
General Smithy Hammer.



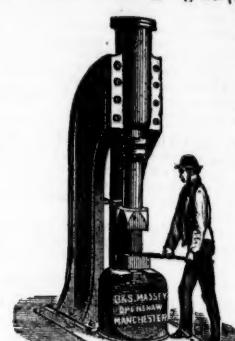
Steam Hammer for Heavy Forging.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

SPECIAL STEAM STAMPS, of great importance for Forging, Stamping, Punching, Bolt-making, Bending, &c. STEAM HAMMERS for Engineers, Machinists, Ship-builders, Steel Tilters, Millwrights, Coppersmiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers. Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks breaking Pig-iron, &c.



Special Steam Stamp.



General Smithy Hammer.

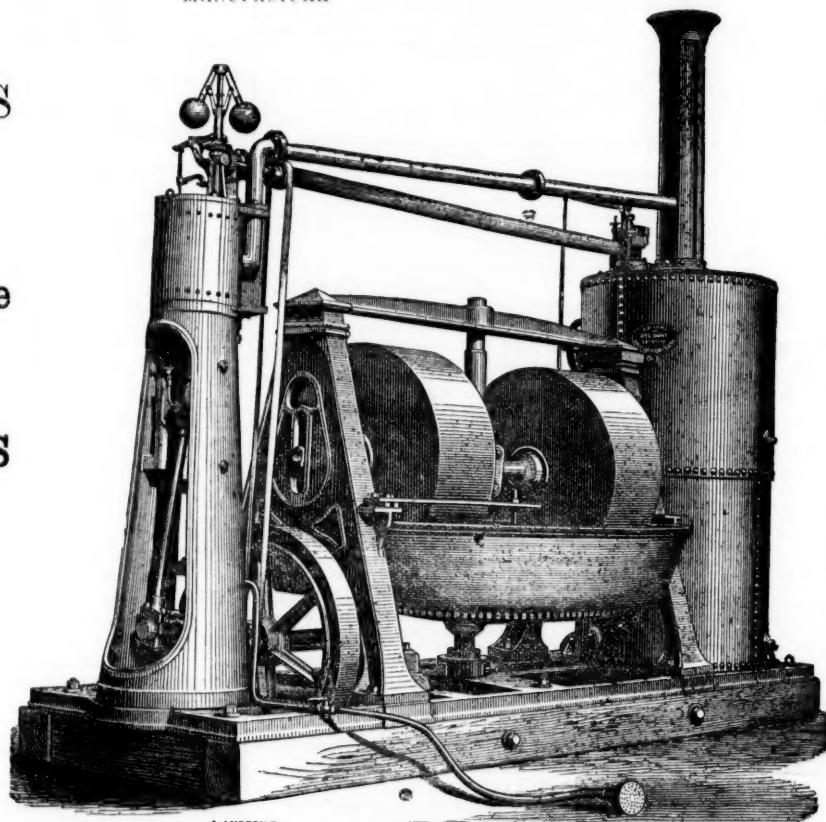
BARROWS & STEWART, ENGINEERS, BANBURY,

MANUFACTURE

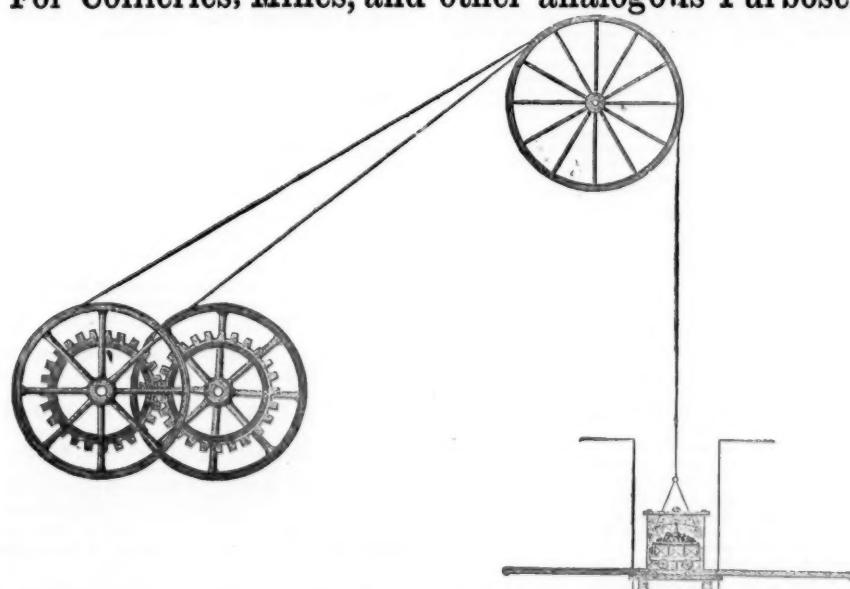
POR TABLE
Steam Engines
With Gear for
Winding,
Pumping, and Ore
Crushing.

ALSO,

COMBINED MILLS
and ENGINES,
with or without
BOILERS,
for Grinding
Cinders, Sand,
Mortar, &c.



WILSON'S PATENT WINDING GEAR, For Collieries, Mines, and other analogous Purposes.



The ADVANTAGES of this Patent is to ECONOMISE the WEAR and TEAR of the ROPES and MACHINERY used in drawing or lowering weights in Mines, or any other similar purposes.

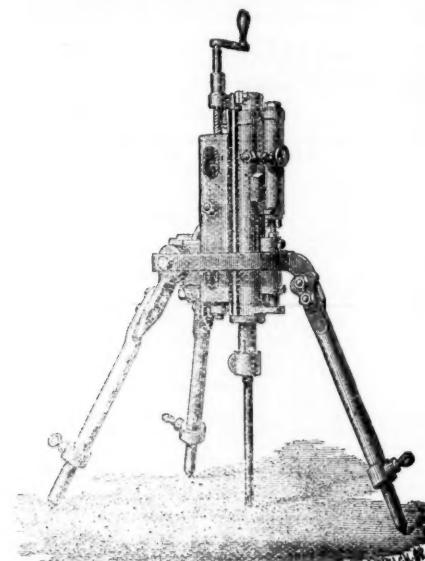
At a mere nominal cost this patent can be applied to any or every Mine now in operation, while its application to any new plant will scarcely make any difference in time or cost.

Applications for Licence to use the said Invention can be made to the Patentee,—

R. WILSON, PHÆNIX WORKS, ROTHERHAM.

Full particulars on application can be had as to terms, drawings, &c., &c.

THE "CHAMPION" ROCK BORER, For Tunnels, Mines, Quarries, AND OTHER WORKS.



The "CHAMPION" Rock Borer has been designed after years of experience of other Rock Drills; it surpasses them in their good qualities, and avoids their imperfections, and while being of the very best make and material, it is absolutely the cheapest in the market.

Intending purchasers can satisfy themselves of the excellence of this Rock Borer by seeing it in actual operation.

ULLATHORNE & CO.,
No. 58, METROPOLITAN BUILDINGS, QUEEN
VICTORIA STREET, LONDON, E.C.

IMPORTANT TO COLLIERY OWNERS.

PATENT STEAM PUMPS,

Awarded the only
Prize Medal for
Vertical Steam Pumps
at the Pomona Show,
Manchester, Nov., 1874.

FOR FORCING
WATER OUT OF MINES,
FEEDING BOILERS, AND
ALL PUMPING PURPOSES.
Prices and testimonials on application to

HULME & LUND,
PATENTEES,
WILBURN IRONWORKS,
Wilburn-street, Regent-road,
Salford, MANCHESTER.

THOMAS TURTON AND SONS,
MANUFACTURERS OF
CAST STEEL for PUNCHES, TAPS, and DIES,
TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK
AXLES, SHAFTS and
FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL | FILED MARKED
BLISTER STEEL, | T. T U R T O N
SPRING STEEL, | EDGE TOOLS MARKED
GERMAN STEEL, | W.M. GREAVES & SON
Locomotive Engine, Railway Carriage and Wagon
Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.
LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.
Where the largest stock of steel, files, tools, &c., may be selected from.

DYNAMITE

FOR BLASTING PURPOSES, can now be supplied in packages, containing 50 lbs. each, for export to any part of the World.

Nobel's Dynamite, or Safety Giant Blasting Powder,

Is the CHEAPEST and MOST POWERFUL EXPLOSIVE for every kind of MINING and QUARRYING OPERATIONS; for blasting in hard or soft, wet or dry ROCKS; for clearing land of TREE ROOTS and BOULDER STONES; for rending massive BLOCKS of METAL; for SUBAQUEOUS and TORPEDO purposes; and for recovering or clearing away of WRECKS, &c.

ITS SAFETY is evidenced by the total ABSENCE OF ACCIDENTS in transit and storage; it is insensible to heavy shocks, its GIANT POWER being only fully developed when fired with a powerful percussion detonator, and hence its great safety.

As a SUBSTITUTE FOR GUNPOWDER its advantages are the GREAT SAVING OF LABOUR, rapidity and INCREASE OF WORK done, FEWER and smaller BORE-HOLES required, greater depth blasted, safety in use NO DANGER FROM TAMPING, absence of smoke, unaffected by damp, &c.

For information, apply to the—

BRITISH DYNAMITE COMPANY (LIMITED), GLASGOW;

OR AT THE

London Export Office, 85, GRACECHURCH STREET, LONDON, E.C.

COAL-CUTTING MACHINERY.

W. and S. FIRTH undertake to CUT, economically, the hardest CANNEL, ANTHRACITE, SHALE, or ORDINARY COAL, ANY DEPTH, UP TO FIVE FEET.

16, YORK PLACE, LEEDS.

THE DARLINGTON ROCK BORER.

NO VALVE-BLOW obtained by the movement of the PISTON.

IN USE IN FRANCE, GERMANY, SPAIN, AND ELSEWHERE.

For particulars of

Rock Borers, Boring Apparatus, dry or wet Air Compressors, Electric Blasting Apparatus, Air-Winding and Pumping Engines, and Underground Locomotives,

Apply to—

JOHN DARLINGTON,

2, COLEMAN STREET BUILDINGS, MOORGATE STREET, LONDON.

MINING MACHINERY AND TOOLS.

THE TUCKINGMILL FOUNDRY COMPANY,

85, GRACECHURCH STREET, LONDON, E.C. WORKS: TUCKINGMILL.

MANUFACTURERS of every description of MINING MACHINERY, TOOLS, MILLWORK, PUMPING, WINDING, & STAMPING ENGINES.

SOLE MAKERS OF

BORLASE'S PATENT ORE-DRESSING MACHINES AND PULVERISERS.

PRICE LISTS CAN BE HAD ON APPLICATION, AND

SPECIAL QUOTATIONS WILL BE GIVEN UPON INDENTS AND SPECIFICATIONS.

TUCKINGMILL FOUNDRY AND ROSEWORTHY HAMMER MILLS

TUCKINGMILL, CORNWALL, AND 85, GRACECHURCH STREET, LONDON, E.C.

IMPORTANT TO STEAM USERS.

THE BARROW SHIPBUILDING COMPANY (LIMITED), having purchased the Patents and Business of the

"HOWARD SAFETY BOILER,"

Desire to call the attention of Steam Users to some important improvements recently introduced in these Boilers, by which any points of objection to previous designs are entirely overcome, whilst the valuable principle, so widely recognised, is retained.

In the improved Boiler there is neither welding or screwing, and the whole of the interior is readily exposed to view and cleaned out. The more simple construction of the improved Boilers admits also of a substantial reduction in price.

Twenty of the Howard Safety Boilers, of 60-horse power each, are in use at Barrow, and altogether about 800 are successfully at work. The Boilers may also be seen at work at Messrs. J. and F. Howard's, Britannia Ironworks, Bedford.

FOR PARTICULARS, APPLY TO

**THE BARROW SHIPBUILDING COMPANY, LIMITED,
BARROW-IN-FURNESS, LANCASHIRE;**

4, CHEAPSIDE, LONDON (three doors from St. Paul's); and 43, MARKET STREET, MANCHESTER.

**N. HOLMAN AND SONS,
BRASS AND IRON FOUNDRIES AND ENGINE WORKS,
PENZANCE AND ST. JUST, CORNWALL.**

Sole Makers of Stephens's Improved Patent Pulveriser,

FOR REDUCING TIN ROUGHS, LEAD SKIMPINGS, AND OTHER ORES.

- 1.—THE CHEAPNESS.
- 2.—THE SIMPLICITY OF CONSTRUCTION.
- 3.—THE DURABILITY OF THE WEARING PARTS.
- 4.—THE QUANTITY OF STUFF PULVERISED.

5.—THE PERFECT MANNER IN WHICH IT IS DONE.

6.—THE SMALL AMOUNT OF POWER REQUIRED TO DRIVE THEM.

MACHINES MADE SPECIALLY FOR EXPORTATION.

For prices, testimonials, and further particulars, apply to N. H. and Sons, Sole Makers, at the above address, or to our London Agent below.

N.B.—Any person or persons infringing on the patent or manufacture of these machines, or any part thereof, will be prosecuted under the Act.

Estimates given for all classes of Mining Machinery, &c., for home and foreign supply.

ORDERS PROMPTLY ATTENDED TO.

London Agent—Mr. J. COATES, 33, Frederick Street, Gray's Inn Road, London, W.C.

HIGGINSON'S PATENT GOVERNORS

FOR

MARINE & LAND ENGINES

ARE THE

CHEAPEST, SIMPLEST, MOST EASILY APPLIED,
MOST SENSITIVE, MOST POWERFUL, OCCUPY LEAST SPACE,
ARE MOST EFFECTIVE IN ALL EMERGENCIES

At sea or on shore, and are the

ONLY ONES WHICH GIVE THE FULL PRESSURE

In the boiler to the piston at the top and bottom of the stroke automatically cutting off the steam according to the requirements of the work, thereby effecting an

IMPORTANT SAVING OF FUEL,

And, in case of a break-down,

INSTANTLY SHUT THE STEAM COMPLETELY OFF

Thus preventing further damage.

For Prices, Licenses to Manufacture, and other particulars, apply to—

ANDREW LEIGHTON & CO.,

6, SOUTH CASTLE STREET, LIVERPOOL.

ASHWORTH'S IMPROVED

STEAM RAM PUMPS.

AWARDED

First Prize MEDALS

AT

MIDDLETON,
WORSLEY,
OLDHAM,

AND

MANCHESTER AND
LIVERPOOL SHOWS

September, 1874,

For Neatness,
Simplicity,

and Efficiency.

Useful to Mill-owners,
Colliery Proprietors,
Chemical Works,
Paper Works, &c.

Single & Double
RAM PUMPS
of all sizes.

Full particulars on
application.

ASHLEY LANE MANCHESTER.

TO COLLERY PROPRIETORS, MINING ENGINEERS, &c.

HADFIELD'S

Steel Colliery Wheels

WITH
PATENT FITTED AXLES AND PEDESTALS.



Hadfield's Steel Foundry Company,

MANUFACTURERS OF EVERY DESCRIPTION OF

CRUCIBLE CAST STEEL CASTINGS

ATTERCLIFFE, SHEFFIELD.

Second Edition. Just published, price 5s. 6d.

A NEW GUIDE TO THE IRON TRADE
OR, MILL-MANAGERS' AND STOCK-TAKERS' ASSISTANT;
Comprising a Series of New and Comprehensive Tables, practically arranged to show at one view the Weight of Iron required to produce Boiler-plates, Sheet-Iron, and Flat, Square, and Round Bars, as well as Hoop or Strip Iron of any dimensions. To which is added a variety of Tables for the convenience of Merchants including a Russian Table.

OPINIONS OF THE PRESS.

"The Tables are plainly laid down, and the information desired can be instantly obtained."—*Mining Journal*.

"900 copies have been ordered in Wigan alone, and this is but a tithe of those to whom the book should command itself."—*Wigan Examiner*.

"I have works priced £4 that do not contain the same information."—*W. W. Kenrick, Colliery Viewer*.

"The work is the result of much labour, and is decidedly valuable!"—*Engineer*.

"By its use many hours time spent in tedious calculations will be saved and many very serious errors avoided."—*Wolverhampton Chronicle*.

To be had on application at the MINING JOURNAL Office, 26, Fleet-street, London.

THE IRON AND COAL TRADES' REVIEW: ROYAL EXCHANGE, MIDDLESBROUGH.

The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general.

Offices of the Review: Middlesbrough-on-Tees (Royal Exchange); London, 11 and 12, Red Lion-court, Fleet-street; Newcastle-on-Tyne (80, Grey-street).

JULY 10, 1875.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.									
Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid		
1500 Alderley Edge, c, Cheshire*	10 0 0	—	12 6 8	0 6 0	Jan. 1875				
30000 Bampfylde, c, m., Devon*	1 0 0	—	1 1/2	1/2 1	0 2 0	0 2 0	June 1873		
5500 Blaen Caelan, s-l, Cardigan* (24 sh.)	3 10 0	—	47 1/2	45 47 1/2	619 15 0	5 0	Aug. 1872		
200 Botallack, t, c, St. Just*	116 5 0	—	—	—	0 10 0	—	—		
10000 Bronfleyd, t, s-l, Cardigan	1 7 6	—	—	—	2 2 0	0 0	Jan. 1872		
4000 Brookwood, c, Buckfastleigh	1 16 0	—	4	3 1/2 4	3 6 6	0 4 0	Mar. 1875		
3248 Cargill, s-l, Newlyn*	5 7 0	—	1	3 1/2 1	4 15 2	0 12 0	Oct. 1872		
6400 Caswell, t, Cumberland*	2 10 0	—	—	—	1 6 6	0 2 6	Aug. 1872		
1000 Carn Brea, c, Illogan	35 0 0	—	41	39 41	308 0	0 1 0	Feb. 1874		
8000 Cath, & Jane, * Penrhynedraeth	5 0 0	—	—	—	0 7 6	0 7 6	June 1873		
2450 Cook's Kitchen, t, Illogan§	20 19 9	—	6	5 1/2 6	11 17 0	0 7 6	July 1873		
10240 Devon Gt. Consols, c, Tavistock*§	1 0 0	—	2 1/2 3	116 10 0	0 12 0	May 1872			
4296 Dolcoath, t, Camborne	10 14 10	—	44	41 43	106 18 0	0 10 0	June 1875		
8500 Drake Walls, t, Calstock	6 0 0	—	—	—	0 2 0	0 2 0	July 1874		
10000 East Balleswelden, t, Sancreed*	1 0 0	—	—	—	0 2 11 0	0 5 0	Feb. 1874		
6144 East Caradon, t, Cleer†	2 14 6	—	1 1/2	1 1/2	14 19 0	0 2 0	Oct. 1872		
300 East Darren, t, Cardiganshire	32 0 0	—	—	—	228 10 0	1 0 0	May 1875		
6400 East Pool, t, Camborne	0 9 9	—	15	14 16	13 13 9	0 2 6	July 1875		
1906 East Wheal Lovell, t, Wendron§	5 19 0	—	8 9	20 7 6	7 6	0 6 0	Oct. 1874		
2800 Foxdale, t, Isle of Man*	25 0 0	—	—	—	80 15 0	0 10 0	Sept. 1873		
40000 Glasgow Cara, c* (30,000 sh. p.), 10,000 16s. p.)	136 1/2	1/2 1/2	8	7 4 0	1 6 0	1 6 0	Jan. 1875		
15000 Great Laxey, t, Isle of Man*	4 0 0	—	14	13 14	17 15 0	0 6 0	Apr. 1875		
25000 Great West Van, t, Cardigan*	2 0 0	—	3/4	3 1/2 3	0 2 0	0 1 0	Aug. 1874		
5908 Great Wheal Vor, t, Helston§	40 15 0	—	3/4	3 1/2 3	15 19 6	0 2 6	Jury. 1872		
6400 Green Hurth, t, Durham*	0 6 0	—	5	4 1/2 5	1 12 0	0 4 0	Oct. 1874		
20000 Grogwinion, t, Cardigan*	2 0 0	—	2	1 1/2 2	0 2 0	0 1 0	Dec. 1874		
9830 Gunnislake (Clitters), t, c	5 5 0	—	1/2	1 1/2 1/2	0 7 3	0 1 0	June 1873		
1024 Herodfoot, t, near Liskeard*	8 10 0	—	3 1/2	3	62 5 0	0 15 0	Oct. 1872		
18000 Hington Down, c, Calstock* (21 sh.)	2 5 0	—	1 1/2	1 1/2	4 3 0	0 5 0	Dec. 1872		
25000 Kilaloe, s-l, Tipperary	1 0 0	—	—	—	0 3 11 0	0 6 0	Mar. 1873		
400 Lisburne, t, Cardiganshire	18 15 0	—	—	—	566 10 0	1 0 0	Apr. 1875		
5120 Lovell, t, Wendron	0 10 0	—	3/4	3 1/2 3	0 17 6	0 1 6	Jan. 1874		
11000 Melinlaur Valley, t, Cardigan*	3 0 0	—	3	2 1/2 3	7 2 0	0 3 0	Jan. 1873		
9000 Minera Mining Co., t, Wrexham*	5 0 0	—	7/2	5 7/2	63 19 2	0 2 0	May 1875		
20000 Mining Co. of Ireland, c, t, e*	7 0 0	—	—	—	0 8 0	0 3 0	July 1872		
13000 North Hendre, t, Wales	2 10 0	—	—	—	1 0 0	0 2 0	June 1875		
2000 North Levant, t, St. Just§	12 2 0	—	3	2 1/2 3	4 13 0	0 12 0	Sept. 1873		
9268 Old Treburret, * s-l ordinary shares	1 0 0	—	—	—	0 9 0	0 9 0	Feb. 1874		
6594 Old Treburret, * s-l (10 per cent. pref.)	0 10 0	—	3/4	3 1/2 3	0 1 4 1/2 0	0 6 0	July 1874		
27858 Old Treburret, * s-l (10 per cent. pref.)	0 10 0	—	3/4	3 1/2 3	0 1 4 1/2 0	0 6 0	July 1874		
5000 Pend-in-a-drea, t, Redruth§	9 17 0	—	5/2	5 5/2	5 0 5	0 5 0	Nov. 1871		
5000 Penhals, t, St. Agnes	3 0 0	—	2	1 1/2 2	13 16 0	0 2 0	July 1875		
45793 Pensthorpe, t, c, Gwennap	2 0 0	—	3/4	3 1/2 3	0 2 0	0 1 0	Nov. 1874		
6000 Phoenix, t, c, Linkinhorne§	4 13 4	—	3 1/2	3	39 19 10	0 4 0	Nov. 1872		
1772 Polberro, t, St. Agnes	15 0 0	—	—	—	1 12 6	0 5 0	Mar. 1872		
18000 Prince Patrick, * s-l, Holywell	1 0 0	—	—	—	0 9 0	0 2 0	Jan. 1875		
1120 Providence, t, Lelant§	16 16 7	—	3/4	2 3	104 12 6	0 10 0	Sept. 1872		
2000 Queens, s-l, Holywell*	2 0 0	—	—	—	0 2 0	0 2 0	Sept. 1874		
12000 Roman Gravels, t, Salop	7 10 0	—	13	12 1/2 12 1/2	4 19 0	0 8 0	May 1875		
10000 Shelton, t, St. Austell	1 0 0	—	—	—	0 1 0	0 1 0	Feb. 1872		
512 South Caradon, t, St. Cleer	1 5 0	—	110	90 100	720 0	0 1 0	June 1875		
5000 South Carn Brea, c, t, Illogan§	2 6 6	—	3/4	2 2 1/2	0 10 0	0 2 6	July 1872		
6123 South Conduffor, t, Camborne§	6 5 6	—	5/2	5 1/2 5 1/2	1 7 6	0 5 0	July 1875		
6000 South Darren, t, Cardigan*	3 6 6	—	—	—	1 1 6	0 1 6	Nov. 1870		
10000 So. Pr. Patrick, * s-l (8000 sh. issued)	1 0 0	—	—	—	0 6 0	0 2 0	Apr. 1875		
8771 St. Just Amalgamated, t*	3 10 0	—	—	—	0 9 0	0 4 0	Nov. 1871		
12000 Tankerville, t, Salop*	6 0 0	—	10 1/2	10 1/2 10 1/2	8 13 0	0 5 0	May 1875		
6000 Tincroft, t, Pool, Illogan	9 0 0	—	20	19 20	48 3 6	0 5 0	May 1875		
18000 Tretolt, t, Bodmin	2 0 0	—	—	—	0 1 0	0 1 0	Mar. 1874		
4000 Trumpet Consols, t, Helston§	7 10 0	—	3/4	3 1/2 3	9 11 0	0 10 0	Nov. 1872		
15000 Van, t, Llanidloes	4 8 0	—	24	23 1/2 25 1/2	15 4 6	0 13 0	July 1875		
8600 W. Chiverton, t, Perranzabuloe§	12 10 0	—	17 1/2	16 18	52 10 0	0 5 0	June 1874		
512 West Tolgus, t, Redruth	95 10 0	—	44	45 47	7 5 0	1 5 0	June 1873		
2048 West Wheal Frances, t, Illogan	27 3 9	—	6/2	6 1/2 7	3 12 6	0 5 0	Oct. 1872		
512 Wheal Bassett, t, Illogan	5 2 6	—	5/2	4 1/2 5/2	638 10 0	1 10 0	Aug. 1875		
2048 Wheal Jane, t, Kew	2 18 10	—	3/2	3 1/2 3	11 5 0	0 5 0	July 1875		
4295 Wheal Kitty, t, St. Agnes	5 4 6	—	3	2 1/2 3	11 19 6	0 2 6	Dec. 1874		
896 Wheat Margaret, t, Uny Lelant§	15 17 6	—	—	—	82 2 3	0 10 0	May 1872		
6000 Wheat Prussia, t, Redruth	2 0 0	—	—	—	0 1 0	0 1 0	Dec. 1874		
12000 Wheat Russell, t, Camborne	1 0 0	—	—	—	0 3 0	0 0 0	Nov. 1874		
10000 Wheat Whisper, t, c, Warleggan*	1 0 0	—	—	—	0 1 6	0 0 0	May 1872		
25000 Wicklow, c, sul, t, Wicklow	2 10 0	—	—	—	52 9 0	0 2 6	Mar. 1875		
10000 Wye Valley, t, Montgomery*	3 0 0	—	3/4	3 1/2	0 3 0	0 3 0	Mar. 1873		

FOREIGN DIVIDEND MIN									